

## **APPENDIX A**

- **PROPOSED PLAN**
- **PUBLIC NOTICE**

## **PROPOSED PLAN**



# Naval Submarine Base - New London

SITE 16 - HOSPITAL INCINERATORS AND  
SITE 18 - SOLVENT STORAGE AREA SOIL - OPERABLE UNIT 11  
PROPOSED PLAN

## Introduction

In accordance with Section 117 of the **Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)**, the law more commonly known as Superfund, this **Proposed Plan** summarizes the Navy's preferred remedy for the soil at Site 16 - Hospital Incinerators and Site 18 - Solvent Storage Area (Building 33). Sites 16 and 18 are two of 25 sites at Naval Submarine Base - New London (NSB-NLON), Groton, Connecticut (Figure 1) being addressed by the Navy's **Installation Restoration (IR) Program**. The **IR Program** is being conducted to identify and clean up sites created by past operations that do not meet today's environmental standards. A total of 12 **Operable Units (OUs)** have been defined to date at NSB-NLON to address portions of the 25 **IR Program** sites.

The groundwater at Site 18 is a portion of the Basewide Groundwater **OU 9**. Site 18 groundwater and the remaining portions of **OU 9** will be addressed in future decision documents. The soil at Sites 16 and 18 has been designated **OU 11**. The proposed remedy for **OU 11** is the first and final action.

Detailed descriptions of Sites 16 and 18 are provided in the **Basewide Groundwater Operable Unit Remedial Investigation (BGOURI)** Report. The document is available in the Information Repositories at the locations identified on Page 5.

This Proposed Plan recommends **No Further Action (NFA)** under **CERCLA** for Sites 16 and 18 soil. The **BGOURI** Report did not identify excessive risks to human health or the environment from contact with the soil at these sites.

## The Cleanup Proposal...

After careful study, the Navy proposes **NFA** under **CERCLA** for:

- Sites 16 and 18 soil (**OU 11**)

There are two ways to formally register a comment:

1. Offer oral comments during the July 28, 2004 public meeting, or
2. Send written comments post-marked no later than August 17, 2004 following the instructions provided at the end of the **Proposed Plan**.

To the extent possible, the Navy will respond to your oral comments during the July 28, 2004 public meeting and hearing. In addition, federal regulations [40 Code of Federal Regulations (CFR) §300.430(f)(3)(i)(F)] require the Navy to respond to all significant comments in writing. The Navy will review the transcript of the comments received at the meeting and all written comments received during the formal comment period before making a final decision and providing a written response to the comments in a document called a **Responsiveness Summary**. The **Responsiveness Summary** will be included in the **Record of Decision (ROD)**.

## What Do You Think?

The Navy is accepting public comments on this **Proposed Plan** from July 16, 2004 to August 17, 2004. You do not have to be a technical expert to comment. If you have a comment or concern, the Navy wants to hear it before making a final decision.

Technical terms shown in bold print are defined in the glossary on Page 6.

## Learn More About the Proposed Plan

The Navy will describe the **Proposed Plan** and hear your questions at an informational public meeting. A formal public hearing will immediately follow this meeting.

July 28	<b>PUBLIC MEETING</b>
<b>Meeting:</b>	6:30 pm
<b>Hearing:</b>	7:00 pm
<b>Date:</b>	Wednesday July 28, 2004
<b>Location:</b>	Best Western Olympic Inn, Route 12, Groton, Connecticut

For further information on the meeting, call Ms. Melissa Griffin at the NSB-NLON Environmental Department, (860) 694-5191

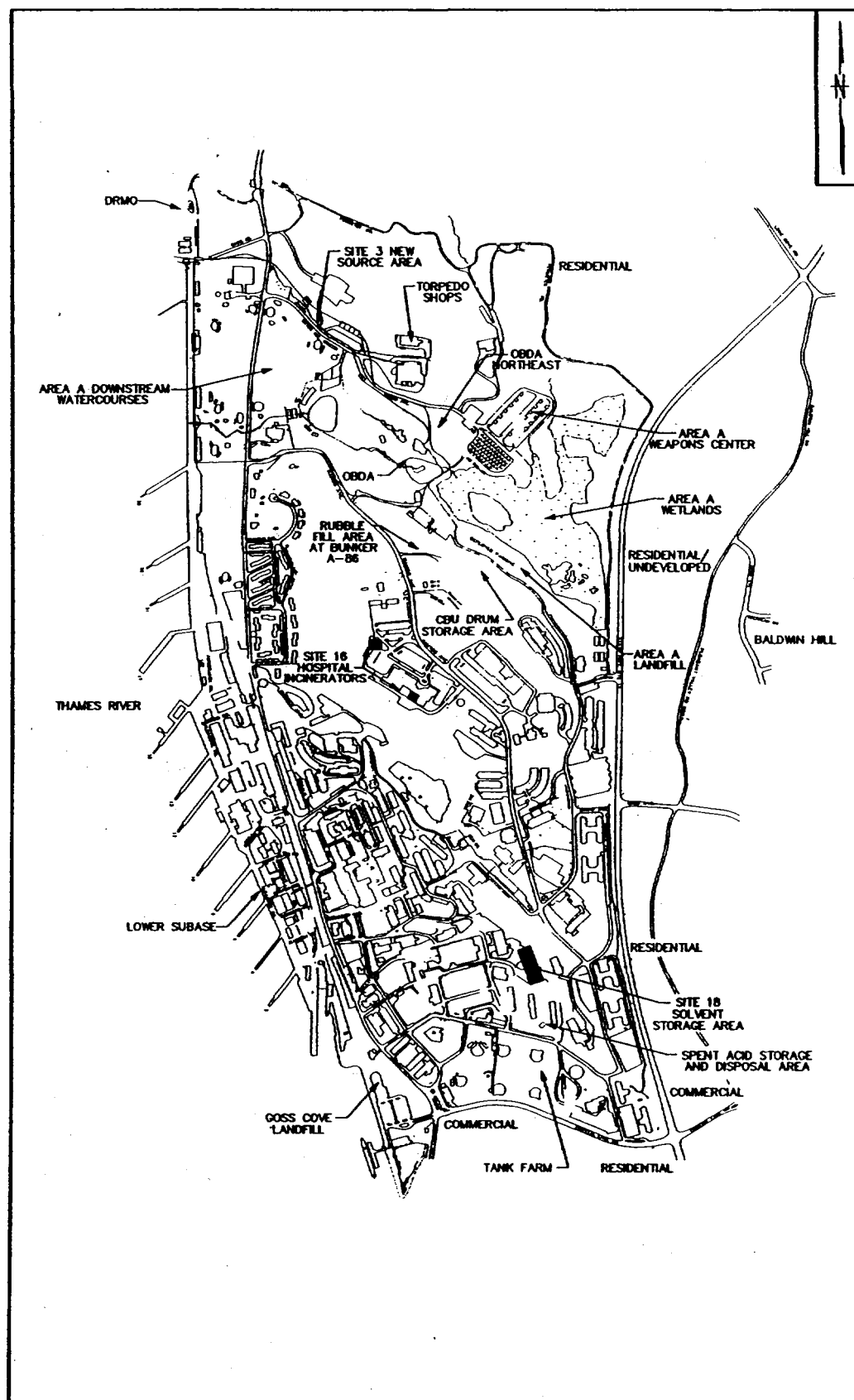


Figure 1. Site Location Map

## History

Site 16 (see Figure 1) consists of the two locations where a mobile incinerator was used at Naval Hospital Groton. In the 1980s, the Naval Hospital Groton operated a skid-mounted waste incinerator at two sites adjacent to the hospital. The two sites (16A and 16B) are located west of Tautog Road, adjacent to Building 452 and Building 449, respectively (Figure 2). According to the Federal Facility Agreement (FFA) (1995), the incinerator was used to destroy medical records and medical waste contaminated with pathological agents. Ash generated by the waste incinerator was transferred to dumpsters for disposal at the municipal landfill.

Site 16 was evaluated during the Initial Assessment Study (IAS) conducted for NSB-NLON. No sampling activities were conducted as part of the study. The study's recommendation for this site was to not pursue further investigation of the site because, at the time of the IAS study, the site was still operational. As a result, no investigation of Site 16 was

conducted during either of the early remedial investigations (RIs) conducted at NSB-NLON, i.e., the Phase I RI (1992) or Phase II RI (1997). The Navy subsequently ceased operation of the incinerator at the hospital and investigated the site during the BGOURI (2001) to determine the impact of the operation of the incinerator. Only soil samples were collected at the site during the BGOURI because of the shallow depth of competent bedrock, the lack of an overburden aquifer, the type contaminants, and the source of contaminants.

Site 18 consists of Building 33, the Solvent Storage Area. The location of Building 33 is shown on Figure 1 and Figure 3. This building has been used for the storage of gas cylinders and 55-gallon drums of solvents such as trichloroethene (TCE) and dichloroethene.

The Solvent Storage Area at Building 33 was identified during the IAS. The site was identified as Study Area F in the FFA and is now identified as Site 18 for the IR Program. Soil samples were collected from the site during the BGOURI (2002).

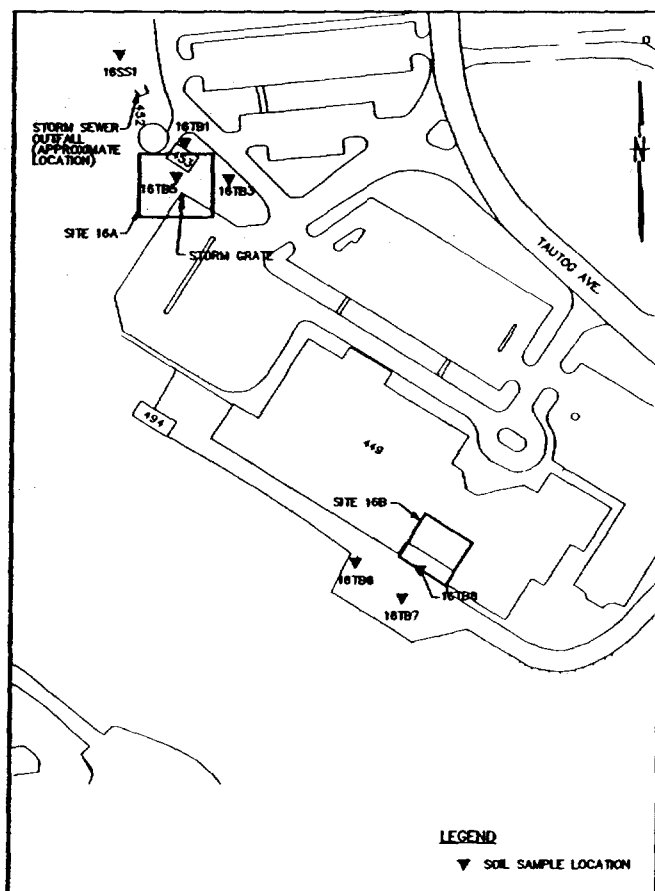


Figure 2. Site 16 Layout Map

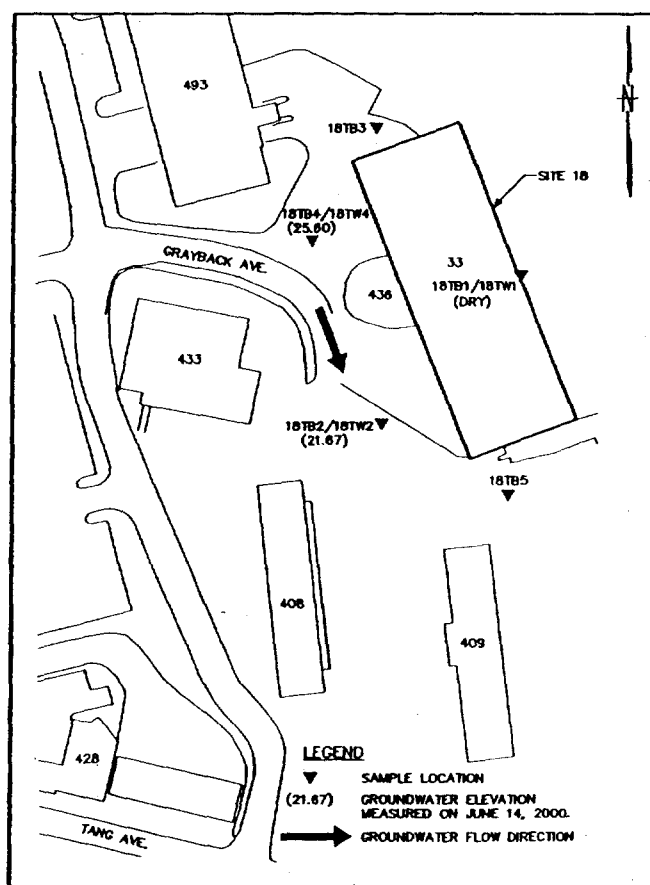


Figure 3. Site 18 Layout Map

## Findings of the Field Investigations

At Site 16, the nature and extent of contamination and human health risk assessment (HHRA) results from the BGOURI indicated that the past operation of the skid-mounted incinerator did not significantly impact the surrounding soil and that site soils do not pose significant risks to any potential human receptors. The HHRA considered construction workers, full-time employees, older child trespassers, and future child and adult residents. All incremental cancer risks (ICRs) from exposure to soil at Site 16 (i.e.,  $5.2 \times 10^{-7}$  for a construction worker to  $7.8 \times 10^{-6}$  for a future child resident) were less than or within United States Environmental Protection Agency's (EPA's) target risk range of  $10^{-4}$  to  $10^{-6}$  and less than Connecticut Department of Environmental Protection's (CTDEP's) acceptable level of  $1 \times 10^{-5}$  for cumulative exposures. Although all ICRs were less than CTDEP's target level for cumulative exposures, chemical-specific ICRs for arsenic (full-time workers, older child trespassers, child residents, and adult residents) and benzo(a)pyrene (child residents) exceeded CTDEP's target level of  $1 \times 10^{-6}$  for individual chemicals. However, the maximum detected concentrations of arsenic and benzo(a)pyrene were less than their respective CTDEP Remediation Standard Regulations (RSRs) for residential exposures which indicates that these risks are not significant. All Hazard Indices (HIs) for exposure to soil at Site 16 were less than EPA's and CTDEP's acceptable level of 1.0.

Several chemicals in Site 16 soil samples were identified as posing a potential contaminant migration concern because their concentrations exceeded screening criteria for contaminant migration from soil to groundwater. Additional information was available to show that these chemicals were not true contaminant migration concerns. For example, the concentrations of dioxins/furans that exceeded the pollutant mobility criteria were found to be consistent with background concentrations of dioxins/furans in soil in the State of Connecticut and across the United States. A polychlorinated biphenyl (PCB) and a metal were detected in Site 16 soil at concentrations that exceeded their respective mobility criterion; however, additional testing using the Synthetic Precipitation Leaching Procedure showed that these contaminants do not pose a significant migration issue. Site conditions would also reduce the potential for contaminant migration from the site. Asphalt pavement covers a majority of the site and limits infiltration through the soil and erosion of surface soil. In addition, relatively competent bedrock is very shallow at this site and it is likely that it would impede vertical contaminant migration.

At Site 18, the nature and extent of contamination and HHRA results from the BGOURI indicated that past storage of solvents at Building 33 (Site 18) did not significantly impact the surrounding soil and groundwater and that the site does not pose significant risks to any potential human receptors. The HHRA determined that health risks from exposure to soil at

## What is Risk and How is it Calculated?

A human health risk assessment estimates "baseline risk." This is an estimate of the likelihood of health problems occurring if no cleanup action were taken at a site. To estimate baseline risk at a site, the Navy undertakes a four-step process:

- Step 1: Analyze Contamination
- Step 2: Estimate Exposure
- Step 3: Assess Potential Health Dangers
- Step 4: Characterize Site Risk

In Step 1, the Navy looks at the concentrations of contaminants found at a site as well as past scientific studies on the effects these contaminants have had on people (or animals, when human studies are unavailable). Comparisons between site-specific concentrations and concentrations reported in past studies help the Navy to determine which contaminants are most likely to pose the greatest threat to human health.

In Step 2, the Navy considers the different ways that people might be exposed to the contaminants identified in Step 1, the concentrations that people might be exposed to, and the potential frequency and duration of exposure. Using this information, the Navy calculates a "reasonable maximum exposure" (RME) scenario, which portrays the highest level of human exposure that could reasonably be expected to occur.

In Step 3, the Navy uses the information from Step 2 combined with information on the toxicity of each chemical to assess potential health risks. The likelihood of any kind of cancer resulting from exposure to a site is generally expressed as an upper bound probability; for example, a "1 in 10,000 chance." In other words, for every 10,000 people that could be exposed, one extra cancer may occur as a result of exposure to site contaminants. An extra cancer case means that one more person could get cancer than would normally be expected to from all other causes. For non-cancer health effects, the Navy calculated a "hazard index." The key concept here is that a "threshold level" (measured usually as a hazard index of less than 1) exists below which non-cancer health effects are no longer predicted.

In Step 4, the Navy determines whether site risks are great enough to cause health problems for people at or near the site. The results of the three previous steps are combined, evaluated, and summarized. The Navy adds up the potential risks from the individual contaminants to determine the total risk resulting from the site.

Site 18 were within target risk ranges. Potential receptors for exposures to soil at Site 18 included construction workers, full-time employees, older child trespassers, and future residents. All ICRs for exposures to soil at Site 18 were less than or within EPA's target risk range of  $10^{-4}$  to  $10^{-6}$  and less than CTDEP's acceptable level of  $1 \times 10^{-6}$  for cumulative exposures. Although all ICRs were less than CTDEP's target level for cumulative exposures, chemical-specific ICRs for arsenic (full-time workers, future child residents, and future adult residents) exceeded CTDEP's target level of  $1 \times 10^{-6}$  for individual chemicals. However, the maximum detected concentration of arsenic was less than its CTDEP RSR for residential exposures which indicates that this risk is not significant. All HIs for exposure to soil at Site 18 were less than EPA's and CTDEP's acceptable level of 1.0.

Site 16 is adjacent to a hospital and Site 18 is a storage building surrounded by a parking lot. Both sites are in well-

developed portions of NSB-NLON. Neither of these sites or the areas near these sites represent habitats suitable for supporting a wildlife population. Based on the site conditions, it is unlikely that ecological receptors are at risk as a result of contaminants associated with Sites 16 and 18.

## The Navy's Proposed Remedy

Based on the results of the BGOURI, it is the Navy's current judgment that NFA is required under CERCLA for the soil at Sites 16 and 18, which is designated as OU 11. These sites pose no current or future potential threats to human health or the environment; therefore, the Navy proposes that no treatment, engineering controls, or institutional controls be implemented at these sites. The EPA and CTDEP concur with the Navy's Proposed Remedy.

## The Public's Role in Alternative Selection

Community input is integral to the selection process. The Navy, EPA, and CTDEP will consider all comments in selecting the remedy prior to signing the ROD. The public is encouraged to participate in the decision-making process.

This Proposed Plan for Sites 16 and 18 soil is available for review, along with supplemental documentation, at the:

Groton Public Library  
52 Newtown Road  
Groton, CT 06340  
(860) 441-6750

Hours:  
Mon. - Thur.: 9:00am - 9:00pm  
Fri.: 9:00am - 5:30pm  
Sat.: 9:00am - 5:00pm  
Sun.: noon - 6:00pm

Bill Library  
718 Colonel Ledyard  
Highway  
Ledyard, CT 06339  
(860) 464-9912

Hours:  
Mon. - Thur.: 9:00am - 9:00pm  
Fri. & Sat.: 9:00am - 5:00 pm  
Sun.: 1:00pm - 5:00pm

For further information, please contact:

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Lester, Pennsylvania 19113-2090  
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United States Environmental Protection Agency  
1 Congress Street  
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## Glossary of Technical Terms

**Chemicals of Potential Concern (COPCs):** Chemicals identified as potential concerns to human health or the environment through a screening-level assessment because their concentrations exceed regulatory criteria.

**Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA):** A federal law passed in 1980 and modified in 1986 by the Superfund Amendments and Reauthorization Act (SARA). The act created a special tax that goes into a trust fund to investigate and clean up abandoned and uncontrolled hazardous waste sites.

**Contaminants:** Any physical, biological, or radiological substance or matter that, at a certain concentration, could have an adverse effect on human health and the environment.

**Dioxins:** A family of 75 organic compounds known chemically as polychlorinated dibenzo-p-dioxins. The individual compounds are technically referred to as congeners. Concern about them arises from their potential toxicity as contaminants and their hydrophobic nature and resistance towards metabolism. Dioxins are typically created and released into the air during combustion processes such as commercial or municipal waste incineration and from burning fuels (e.g., wood, coal, or oil). They can also be created in small quantities during certain types of chemical manufacturing and processing.

**Feasibility Study:** A Feasibility Study report presents the development, analysis, and comparison of remedial alternatives.

**Furans:** A family of 135 organic compounds known chemically as polychlorinated dibenzofurans. The individual compounds are technically referred to as congeners. Typically found with dioxins and having similar properties, concern about furans arises from their potential toxicity as contaminants and their hydrophobic nature and resistance towards metabolism.

**Human Health Risk Assessment (HHRA):** Scientific method to evaluate the effects on human receptors from exposure to contaminants in site-specific media.

**Installation Restoration (IR) Program:** The purpose of the IR Program is to identify, investigate, assess, characterize, and clean up or control releases of hazardous substances and to reduce the risk to human health and the environment from past waste disposal operations and hazardous material spills at Navy activities in a cost-effective manner.

**Metals:** Metals are naturally occurring elements in the earth. Some metals, such as arsenic and mercury, can have toxic effects. Other metals, such as iron, are essential to the metabolism of humans and animals.

**Operable Unit (OU):** Operable Units are site management tools that define discrete steps towards comprehensive actions as part of a Superfund site cleanup. They can be based on geological portions of a site, specific site problems, initial phases of action, or any set of actions performed over time or concurrently at different parts of the site.

**Polychlorinated Biphenyls (PCBs):** A family of 204 organic compounds, formerly used in the manufacture of plastics and in electrical transformers. They were used because they conducted heat well while being fire resistant and good electrical insulators. PCBs tend to bioaccumulate in fish and other animals and are probable human carcinogens. Studies also suggest non-cancer effects on humans and animals from these compounds.

**Proposed Plan:** A public participation requirement in which the lead agency summarizes for the public the preferred cleanup strategy and rationale for preference and reviews the alternatives presented in the detailed analysis of the Feasibility Study. The document is used to solicit public review and comment on all alternatives under consideration.

**Record of Decision (ROD):** An official document that describes the selected remedy for a site. The ROD documents the remedy selection process and is typically issued by the lead agency following the public comment period.

**Remedial Investigation (RI):** A Remedial Investigation report [e.g., Basewide Groundwater Operable Unit RI (BGOURI)] describes the site, documents the nature and extent of contaminants detected at the site, and presents the results of the risk assessment.

**Remediation Standard Regulations (RSRs):** Connecticut regulations (Sections 22a-133k-1 through -3 of the Regulations of Connecticut State Agencies) concerning the remediation of polluted soil and groundwater.

**Responsiveness Summary:** A summary of written and oral comments received during the public comment period, and the Navy's responses to these comments. The Responsiveness Summary is an important part of the ROD, highlighting community concerns for decision makers.





**PUBLIC NOTICE**

# PUBLISHER'S CERTIFICATE

State of Connecticut )  
County of New London, ) ss. New London

On this 16th day of July, 2004,

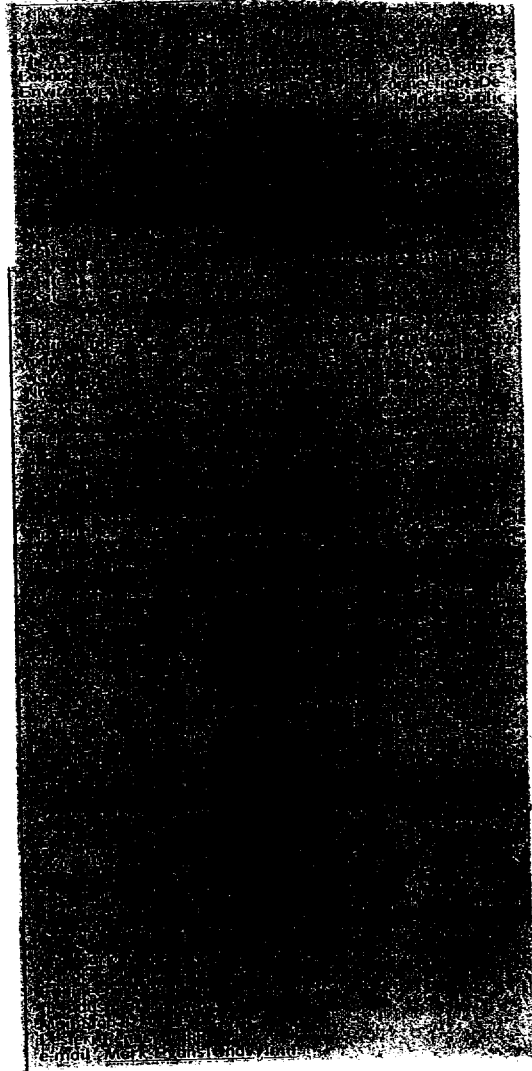
Personally appeared before the undersigned, a  
Notary Public within and for said County and  
State, Kimberlee R. Butler, Legal Advertising Clerk,  
of THE DAY, a daily newspaper published  
at New London, County of New London, State of  
Connecticut, who being duly sworn, states on  
oath, that the Order of Notice in the case of  
LEGAL 383 PUBLIC NOTICE  
a true copy of which is hereunto annexed, was  
published in said newspaper in its issue(s) of  
07/16/2004

Kimberlee R. Butler

Subscribed and sworn to before me  
this 16th day of July, 2004

Lorraine Marten  
Notary Public

My commission expires 9-30-2008



## **APPENDIX B**

- **STATE OF CONNECTICUT  
CONCURRENCE LETTER**
- **SITE 16 SOIL DIOXIN MEMORANDUM**

**STATE OF CONNECTICUT  
CONCURRENCE LETTER**



**STATE OF CONNECTICUT**  
**DEPARTMENT OF ENVIRONMENTAL PROTECTION**

79 ELM STREET HARTFORD, CONNECTICUT 06106

PHONE: (860) 424-3001



A. Jr J. Rocque, Jr.  
Commissioner

September 30, 2004

Susan Studlien, Director  
U.S. Environmental Protection Agency  
Office of Site Remediation and Restoration  
1 Congress St.  
Suite 1100 (HIO)  
Boston, MA 02114-2023

Sean P. Sullivan, Jr.  
Captain, USN  
Commanding Officer  
Naval Submarine Base New London  
Box 00  
Groton, CT 06349

Re: State Concurrence with Remedy for Soil - Site 16 Hospital Incinerator and Site 18  
(Solvent Storage Area)-, Naval Submarine Base New London, Groton, Connecticut

Dear Captain Sullivan and Ms. Studlien:

The Connecticut Department of Environmental Protection (CTDEP) concurs with the remedy selected by the EPA and the Navy for soil at Site 16 (Hospital Incinerator) and Site 18 (Solvent Storage Area), Naval Submarine Base New London, Groton, Connecticut. The Navy plans to take no further action at these two sites. The Navy has demonstrated compliance with the direct exposure and pollutant mobility criteria specified in the State's Remediation Standard Regulations (Regulations of Connecticut State Agencies, Sections 22a-133k-1 to k-3).

The remedy is described in detail in the proposed plan dated July 2004, and in the draft Record of Decision dated September 2004.

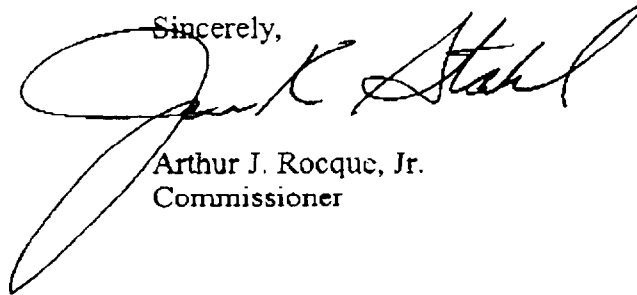
The Navy will address ground water at these sites under a separate remedy. CTDEP expects that the groundwater remedy will comply with all state regulatory requirements.

State Concurrence- Sites 16 & 18  
Page 2 of 2

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We look forward to working with the Navy and the US Environmental Protection Agency toward continued remediation at the Naval Submarine Base.

Sincerely,

A handwritten signature in black ink, appearing to read "Arthur J. Rocque, Jr.", is written over the typed name.

Arthur J. Rocque, Jr.  
Commissioner

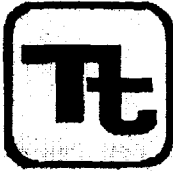
AJR:MRL

C: Mr. Mark Evans, Remedial Project Manager  
Naval Facilities Engineering Command  
Engineering Field Activity Northeast  
10 Industrial Highway  
Mail Stop 82, Code 1823/ME  
Lester, PA 19113-2090

Ms. Kymberlee Keckler, Remedial Project Manager  
US Environmental Protection Agency- Region 1  
1 Congress St.  
Suite 1100 (HBT)  
Boston, MA 02114-2023

**SITE 16 SOIL DIOXIN MEMORANDUM**





## MEMORANDUM

Revision 1

**TO:** Mr. Mark Lewis, CTDEP  
Ms. Kymberlee Keckler, USEPA  
Mr. Mark Evans, EFANE  
Ms. Melissa Griffin, NSB-NLON

**DATE:** August 4, 2004

**FROM:** Corey Rich, CTO 841 Project Manager

**SUBJECT:** Resolution of Site 16 Soil Dioxin Issue  
Exceedances of Connecticut Pollutant Mobility Criteria  
NSB-NLON, Groton, Connecticut

Mr. Mark Lewis of the Connecticut Department of Environmental Protection (CTDEP) contacted Mr. Corey Rich of Tetra Tech NUS, Inc., a contractor for the Navy, by phone on July 1, 2004 regarding the draft Proposed Plan and Record of Decision for Sites 16 and 18 soil (Operable Unit 11) at Naval Submarine Base – New London (NSB-NLON), Groton, Connecticut. He said that the Proposed Plan and Record of Decision included discussions that indicated dioxins were detected in Site 16 soil at concentrations that exceeded Connecticut Pollutant Mobility Criteria (PMC). Mr. Lewis said his main concern was that the State would not be able to concur with the proposed No Further Action remedy for Site 16 soil if there was contaminated soil that would be left in place with contaminant concentrations in excess of the Connecticut PMC. Mr. Lewis said he did not think that the dioxin concentrations were a true concern, but additional evaluation was necessary to write off the potential issue. In addition, he said that the State does not have any promulgated PMC for dioxins and he did not recall the State providing acceptance of any additional PMC for dioxins calculated by the Navy. He said that he would review his records regarding the issue. In a July 8, 2004 e-mail, Mr. Lewis said that the State had approved the Navy's additional PMC for dioxins in a letter dated August 18, 1999. Mr. Lewis also requested in a July 12, 2004 e-mail that the Navy provide available site-specific dioxin concentrations for Installation Restoration Program sites at NSB-NLON, Groton, Connecticut.

To address the CTDEP's concerns, TtNUS completed additional evaluation of the Site 16 soil dioxin issue for the Navy and the results of the evaluation are summarized below.

- The CTDEP has not promulgated PMC for dioxin/furans, consequently, TtNUS calculated values following the methodology presented in the CTDEP Remediation Standard Regulations (1996) and using professional judgment. Values for dioxin/furans were derived by first calculating a groundwater protection standard for 2,3,7,8-TCDD ( $2.33 \times 10^{-7}$  ug/L). This value was multiplied

by 20 to produce a GA pollutant mobility standard for 2,3,7,8-TCDD ( $4.67 \times 10^{-9}$  mg/kg). The GA pollutant mobility standard then was multiplied by 10 to produce a GB pollutant mobility standard value for 2,3,7,8-TCDD ( $4.67 \times 10^{-8}$  mg/kg). Standards were then calculated for each of the positively detected dioxin/furans congeners by dividing the GB pollutant mobility standard for 2,3,7,8-TCDD with the associated toxicity equivalency factor (TEF) for the individual dioxin/furans congeners. These values were presented in a letter dated April 14, 1999 from TtNUS to the CTDEP. The dioxin PMC were subsequently used in the Basewide Groundwater Operable Unit Remedial Investigation Report (TtNUS, 2002) to screen analytical data for soil samples collected at the Site 16 – Hospital Incinerators site.

- An EPA Soil Screening Level for migration from soil to groundwater for 2,3,7,8-TCDD ( $5.6 \times 10^{-6}$  mg/kg) was also obtained from EPA's Soil Screening Calculations Internet site located at <http://www.epa.gov/superfund/programs/risk/calctool.htm>. The dioxin Soil Screening Level was used in the Basewide Groundwater Operable Unit Remedial Investigation Report (TtNUS, 2002) to screen the analytical data from the soil samples collected at the Site 16 – Hospital Incinerators site.
- A comparison of detected concentrations of dioxin/furans in soil to the CTDEP- and EPA-based PMC was presented in the Basewide Groundwater Operable Unit Remedial Investigation Report (TtNUS, 2002). Detected concentrations of individual dioxin/furan congeners in soil exceeded the calculated CTDEP PMC, but were less than the EPA Soil Screening Levels.
- A discussion of the uncertainty associated with the migration of dioxins/furans from soil to groundwater was presented in Section 9.6.4, Uncertainty Analysis, of the Basewide Groundwater Operable Unit Remedial Investigation Report (TtNUS, 2002). The discussion concluded that although both the CTDEP PMC and EPA Soil Screening Levels are conservative, the EPA Soil Screening Levels give a more realistic indication of a chemical's potential to migrate from soil to groundwater since the EPA Soil Screening Levels are based on chemical-specific parameters. In addition, dioxin/furans are considered to be very persistent and immobile in soil and are essentially insoluble in water. Consequently, the report concluded that migration of dioxins/furans from soil to groundwater at Site 16 was not expected to be a significant migration pathway.
- To further evaluate the dioxin issue, Toxicity Equivalency (TEQs) concentrations were calculated for each of the Site 16 soil samples and the results are presented in Table 1 which is attached to this memorandum. Dioxin concentrations detected in soil and sediment samples collected during Installation Restoration Program investigations at Naval Submarine Base – New London, Groton, Connecticut are summarized in Table 2. The data provided in the table shows that the dioxin

concentrations detected in Site 16 soil samples are generally within the range of dioxin concentrations detected at the other sites and the maximum dioxin concentration detected in Site 16 soil samples (4.16 ng/kg) was significantly less than the maximum dioxin concentrations detected in Site 2 and Site 6 soil samples (61.0 and 110 ng/kg, respectively). The EPA and other sources have estimated that background concentrations of dioxins in urban areas of the United States range from 2.21 to 21 ng/kg TEQ (ENVIRON, 2002). The EPA also estimated that the background concentration of dioxins in rural areas of Connecticut is 5.74 ng/kg TEQ (ENVIRON, 2002). The maximum dioxin concentration detected in Site 16 soil samples was 4.16 ng/kg TEQ (see Table 1), which is within the background dioxin concentration range for urban areas and below the background dioxin concentration for rural areas in Connecticut.

- Conclusion: These results indicate that the dioxin concentrations in the soil at Site 16 are background concentrations and should not be a pollutant mobility concern to the CTDEP. This information will be incorporated into the Proposed Plan and Record of Decision for Sites 16 and 18 soil as necessary to resolve the potential dioxin issue.

## **References**

CTDEP (Connecticut Department of Environmental Protection), 1996. Remediation Standard Regulations. Bureau of Water Management, Permitting, Enforcement and Remediation Division, Hartford, Connecticut, January.

CTDEP, 1999. Letter from Ms. Elsie Patton, CTDEP to Mr. Corey Rich, TtNUS regarding Additional Remediation Criteria, Basewide Groundwater Operable Unit Remedial Investigation, Naval Submarine Base - New London, Groton, Connecticut. Hartford, Connecticut. August 18.

ENVIRON International Corporation, 2002. Sources and Background Exposure to Dioxins in the Environment, Emeryville, California. June 7.

TtNUS (Tetra Tech NUS, Inc.), 1999. Letter from Mr. Corey Rich to Connecticut Department of Environmental Protection regarding Responses to CTDEP's Comments on Calculated Remediation Standards, Existing Data Summary Report for the Basewide Groundwater Operable Unit Remedial Investigation, Naval Submarine Base - New London, Groton, Connecticut. Pittsburgh, Pennsylvania. April.

TtNUS, 2002. Basewide Groundwater Operable Unit Remedial Investigation Report for Naval Submarine Base New London, Groton, Connecticut. King of Prussia, Pennsylvania. January.

TABLE 1

**TOXICITY EQUIVALENCY (TEQ) CONCENTRATIONS FOR SITE 16 SOIL SAMPLES  
BASEWIDE GROUNDWATER OPERABLE UNIT REMEDIAL INVESTIGATION  
NSB-NLON, GROTON, CONNECTICUT**

location matrix	TOXICITY EQUIVALENT FACTOR (TEF)	S16SB01 SS S16SB010001-SO S16SB010001	S16SB03 SS S16SB030001-SO S16SB030001	S16SB05 SS S16SB050001-SO S16SB050001	S16SB06 SS S16SB060001-SO S16SB060001	S16SB07 SS S16SB070001-SO S16SB070001	S16SB08 SS S16SB080001-SO S16SB080001	S16SB08 SB S16SB080406-SO S16SB080406	S16SS01 SS S16SS01-SO S16SS01
top_depth		0	0	0	0	0	0	4	0
bottom_dep		1	1	1	1	1	1	5	0
sample_dat		6/13/2000	6/13/2000	6/13/2000	6/13/2000	6/13/2000	6/13/2000	6/13/2000	6/25/2000
<b>Dioxins/Furans (ng/kg)</b>									
1,2,3,4,6,7,8-HPCDD	0.01	21	1.9 U	7	3.1 U	120	20	24	31
1,2,3,4,6,7,8-HPCDF	0.01	3	0.41	3.4	0.44	0.21 U	0.33 U	0.5 U	5.4
1,2,3,7,8-PECDF	0.05	0.13 U	0.2 U	0.21	0.11 U	0.19 U	0.12 U	0.14 U	0.37 U
2,3,4,7,8-PECDF	0.5	0.13 U	0.2 U	0.36	0.11 U	0.19 U	0.12 U	0.14 U	0.38 U
2,3,7,8-TCDF	0.1	0.18 U	0.19 U	1.8	0.13 U	0.16 U	0.15 U	0.16 U	0.58 U
OCDD	0.0001	740	110	240	450	29000	4300	6400	1200 J
OCDF	0.0001	7.9	0.3 U	2.9	0.24 U	0.25 U	0.13 U	0.18 U	12 J
2,3,7,8-TCDD TEQ		0.360	0.089	0.499	0.102	4.16	0.672	0.929	0.618

**Notes:**

For non-detects, one-half the detection limit was used in the calculation of the TEQs.

**TABLE 2****SUMMARY OF DIOXIN TEQ CONCENTRATIONS IN SOIL AND SEDIMENT SAMPLES  
COLLECTED DURING INSTALLATION RESTORATION PROGRAM INVESTIGATIONS  
NSB-NLON, GROTON CONNECTICUT**

<b>SITE</b>	<b>MEDIUM</b>	<b>NUMBER OF SAMPLES</b>	<b>MINIMUM DIOXIN TEQ CONCENTRATION (ng/kg)</b>	<b>MAXIMUM DIOXIN TEQ CONCENTRATION (ng/kg)</b>
Site 2 - Area A Landfill	Soil	4	ND	61.0
Site 3 - Area A Downstream	Sediment	2	ND	5.53
Site 6 - DRMO	Soil	2	25.0	110
Site 8 - Goss Cove	Soil	2	ND	0.284
Site 16 - Hospital Incinerators	Soil	8	0.089	4.16
Site 20 - Area A Weapons Center	Sediment	1	ND	ND

ND – Nondetect

1 PROPOSED PLANS FOR  
2 SITE 3 - NEW SOURCE AREA SOIL;  
3 SITES 7 AND 14 SOIL (OU8); AND  
4 SITES 16 AND 18 SOIL (OU11)

5 -----

6 Public hearing taken at the  
7 Best Western Olympic Inn, 360 Route  
8 12, Groton, Connecticut, before  
9 Clifford Edwards, LSR, Connecticut  
10 License No. SHR.407, a Professional  
11 Shorthand Reporter and Notary  
12 Public, in and for the State of  
13 Connecticut on July 28, 2004, at  
14 6:41 p.m.

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1 APPEARANCES:

2

3 COREY A. RICH, PE

4 TETRA TECH NUS, INC.

5 611 Andersen Drive

6 Pittsburgh, PA 15220

7

8

9 MARK D. EVANS

10 NAVFAC

11 10 Industrial Highway

12 Mail Stop #82

13 Lester, PA 19113

14

15

16 ALSO PRESENT:

17 KYMBERLEE KECKLER

18 MELISSA COKAS

19 FELIX PROKOP

20 LARRY GIBSON

21 MARK LEWIS

22

23

24

## PROCEEDINGS

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MR. EVANS: Corey was going to give some technical presentations on each individual site real quick -- well, a little quicker now.

At the end of that presentation, we were going to give anybody that wanted to actually make a formal comment that would actually be part of the public record a chance to do that.

At that point, you can stand, state your name so that the stenographer can get that and it will actually be part of the public record. Okay?

MR. RICH: Thank you, Mark.

As you're all aware, my name is Corey Rich. I work with Tetra Tech NUS. We're a consultant for the Navy. We're here tonight to talk about three proposed plans that were issued back on July 16.



1                   The three proposed plans  
2           cover the soil operable units at Site  
3           3, Sites 7 and 14, which are listed as  
4           OU8 -- which is designated as OU8,  
5           Sites 16 and 18 soil, which are  
6           designated as OU11.

7                   As Mark said, we're going  
8           to go through some technical  
9           presentations on the three proposed  
10          plans and I'm going to start off with  
11          a quick review of the regulatory  
12          process.

13                   The Comprehensive  
14          Environmental Response Compensation  
15          Liability Act, or CERCLA, has a set  
16          process we need to go through. These  
17          sites we've investigated and are here  
18          to discuss -- are covered under  
19          CERCLA.

20                   The first step is to go  
21          through a preliminary assessment or  
22          site inspection, let's us know if  
23          there's a potential problem at that  
24          site.

1                   If that shows that there's  
2           an issue, we go into a remedial  
3           investigation which is a more in-depth  
4           look at that site, and what you try  
5           and do is find out what's there, what  
6           type of contamination and who will it  
7           impact or what.

8                   With a feasibility study,  
9           we try to determine what we do with  
10          what's there, determine the approach  
11          for cleaning it up.

12                   Once we go through and  
13          determine that approach, we need to  
14          present that information in a proposed  
15          plan, which we're here to do tonight,  
16          and we take the multiple alternatives  
17          that were looked at in the FS and  
18          select one of those and present it to  
19          the public.

20                   We need to then formally  
21          document that in a record of decision  
22          and incorporate any public input we  
23          got during our public meeting with a  
24          Responsiveness Summary.

1                   After we come up with our  
2           alternative and document it in the  
3           ROD, we have to come up with a  
4           remedial design and how we are going  
5           to implement that remedy and actually  
6           go out and do the remedy itself during  
7           remedial action, and then we have to  
8           monitor things through operations and  
9           maintenance.

10                   Just quickly give you some  
11           more in-depth information on the  
12           proposed plan and record of decision.  
13           The proposed plan is a document used  
14           to facilitate public involvement in  
15           the CERCLA process.

16                   It presents the lead  
17           agencies preferred alternatives,  
18           presents the alternatives evaluated  
19           and the reasons for recommending that  
20           preferred alternative, and it's a  
21           public participation requirement under  
22           CERCLA and the NCP.

23                   The record of decision is  
24           a legal document that's prepared by

1 the lead agency and with the support  
2 of the -- support agencies, in this  
3 case, the EPA and the State of  
4 Connecticut, and it certifies that the  
5 remedy was selected following the  
6 CERCLA and NCP process.

7 It provides the technical  
8 rationale and background information  
9 that's provided in the admin record  
10 and identifies the engineering  
11 components and outlines remedial  
12 actions and objectives and cleanup  
13 goals for the remedy. And it's a  
14 tool to explain to the public the  
15 problems the remedy seeks to address  
16 and the rationale for its selection.

17 I'll go through the first  
18 site, Site 3, new source area. Just  
19 some brief details about the site.  
20 It's located in the northern part of  
21 the sub base. Hopefully you can see  
22 this map of the sub base over here.

23 This is the northern end  
24 of the sub base. Site 3 itself is

1           this area. And Site 3 new source area  
2           is just a small area right about  
3           there.

4                     It's about six-hundredths  
5           of an acre.

6                     It was an abandoned  
7           disposal area. Some rusted drums and  
8           wire cable are visible at the site.  
9           It was detected or found during the  
10          OU3 Site 3 remedial action.

11                    It's petroleum  
12          contamination was found at that time  
13          and the site was not cleaned up at  
14          that time because we needed to  
15          determine what the nature and extent  
16          of that contamination was.

17                    But there were some  
18          temporary measures put into place to  
19          minimize further contaminant migration  
20          until we could study the site and  
21          implement the remedy.

22                    Mark, can you show us --

23                    This is just a blowup  
24          really of our larger scale figure over

1           there. Mark's pointing to the new  
2           source area there just to give you an  
3           idea. There's the torpedo shops.  
4           This is the Area A Downstream, Site 3.  
5           Stream 5 of the Area A Downstream runs  
6           adjacent to Site 3 new source area.

7                       Just minimize that.

8                       Okay. This is a picture  
9           of the site.

10                      You can see the rusted  
11           drum here and here, and some wire  
12           cable there. Just another view of the  
13           site looking in the southerly  
14           direction. Stream 5 is right here.  
15           This is Triton Road, and the golf  
16           course is over there.

17                      Just a quick summary of  
18           the nature and extent of  
19           contamination. The site was  
20           investigated during a data gap  
21           investigation. The data and results  
22           were presented in the basewide ground  
23           water operable unit remedial  
24           investigation update and feasibility

1 study that was finalized in July of  
2 2004.

3 In general, the main  
4 contamination found was TPH, or  
5 petroleum contamination, and we did  
6 see some stained soil and some free  
7 petroleum oil on the water surface out  
8 there. We've estimated about 385  
9 cubic yards is contaminated and will  
10 need to be addressed.

11 We also found some  
12 polynuclear aromatic hydrocarbons, or  
13 PAHs, in a small area just adjacent to  
14 Triton Road, which was a surface soil  
15 sample that we had.

16 And in evaluation of that  
17 some more, we determined it was  
18 related to the actual asphalt  
19 pavement. We may have picked up a  
20 little asphalt in our sample or  
21 something like that that skewed our  
22 results.

23 We also saw some low level  
24 concentrations of some other

1 compounds, volatile organics, some  
2 pesticides, one PCB, and some  
3 inorganics.

4 Show the slide. Just  
5 maximize that.

6 This is a cross-section  
7 through the site itself. That  
8 disposal area is up here.

9 This is Stream 5, Triton  
10 Road.

11 What we have found is  
12 there's kind of a smear zone of  
13 contamination right along the bedrock  
14 interface and water table.

15 Looks like some oil was  
16 released from those rusted drums and  
17 has migrated into the subsurface and  
18 down along that bedrock interface.

19 We went through a risk  
20 assessment for this site, both  
21 human health and ecological risk  
22 assessments. Generally the only thing  
23 we found there was TPH or petroleum.

24 And there were generally



1           no risks for the contaminants other  
2           than TPH, but the TPH did exceed  
3           Connecticut standards which shows a  
4           potential issue there. It poses both  
5           a direct exposure concern and a  
6           contaminant migration concern.

7                       We also looked at eco  
8           risks and we didn't really see any  
9           significant risks from the non-TPH  
10          contaminants out there, but with there  
11          being some mobile free product there,  
12          that would pose a potential issue to  
13          the ecological receptors.

14                     So the overall results of  
15          the risk assessment showed that TPH  
16          was our main contaminant of concern.

17                     So we went into a  
18          feasibility study to determine the  
19          appropriate approach for addressing  
20          the issues, the TPH contamination, and  
21          basically we want to protect current  
22          receptors.

23                     That would be construction  
24          workers, somebody out their digging,

1        putting in sewer lines, something like  
2        that, current employees or a  
3        trespasser from any exposure to the  
4        contaminated soil.

5                    We also want to protect  
6        any groundwater that's at the site.  
7        We also want to protect any aquatic  
8        ecological receptors in Stream 5  
9        adjacent to the site, and also protect  
10       any potential future residents that  
11       may live in that area if the base  
12       would subsequently be closed or  
13       something like that.

14                   When we went into the  
15       feasibility study, we looked at  
16       general response actions or main  
17       approaches for addressing this  
18       contamination and then looked at  
19       process options and technologies and  
20       went through a screening process and  
21       honed it down to three different  
22       alternatives that would be appropriate  
23       for the TPH contamination out there.

24                   We have to include a no

1        action alternative under CERCLA for  
2        comparison purposes. We looked at a,  
3        basically a passive alternative of  
4        institutional controls, just limiting  
5        access to the site.

6                    Because it is petroleum,  
7        it naturally degrades, we have some  
8        natural degradation that would occur  
9        on the site which hopefully would  
10       eventually clean up on its own. Just  
11       by restricting access, we would  
12       eliminate any risks to the public or  
13       environment and do some limited  
14       monitoring just to confirm that.

15                   Or our third alternative  
16       Is a more aggressive approach: We  
17       actually go out and excavate and  
18       remove the contaminated soil and  
19       dispose of that off site, get rid of  
20       the problem.

21                   Go back one second.

22                   Each of these  
23       alternatives, I have a present worth  
24       cost at the end of them.

1                    Obviously no action would  
2                    be zero dollars.

3                    Institutional controls  
4                    would run about \$124,000 over a  
5                    30-year life cycle, and excavation and  
6                    off-site disposal would be about  
7                    \$286,000.

8                    Each of those alternatives  
9                    go through an evaluation or evaluation  
10                   process against seven main criteria  
11                   and then two modifying criteria.  
12                   Within the FS itself, these seven  
13                   criteria are evaluated -- or each  
14                   alternative is evaluated with these  
15                   criteria.

16                   These threshold criteria  
17                   are mandatory; the alternatives need  
18                   to meet these. The balancing criteria  
19                   are more subjective or qualitative  
20                   evaluation criteria.

21                   And then the modifying  
22                   criteria of state acceptance and  
23                   community acceptance provides the Navy  
24                   with input from both the state and the

1 public on their alternatives and helps  
2 keep all parties informed and involved  
3 in the decision-making process.

4 For Site 3, based on that  
5 evaluation and regulatory input -- I  
6 guess let me take one step back.

7 The petroleum  
8 contamination that was found at this  
9 site isn't directly covered under  
10 CERCLA, and there were no risks from  
11 the CERCLA-related contaminants at the  
12 site.

13 So what the Navy is  
14 proposing under CERCLA is no further  
15 action for this site because there  
16 were no risks from the non-TPH  
17 contaminants at the site.

18 But they understand  
19 there's a concern from the petroleum  
20 and they have selected alternative S3,  
21 which is excavation and off-site  
22 disposal for the contaminated soil,  
23 and that cleanup would be done under  
24 the Connecticut regulations and ,

1 meeting a TPH of 500 milligrams per  
2 kilogram and eliminating the mobile  
3 free product out there.

4 The 500 milligrams per  
5 kilogram level would meet residential  
6 reuse requirements.

7 And as part of that  
8 alternative, they would go in and do  
9 some minor additional characterization  
10 just to clarify the size of the area,  
11 the volume. They would go through  
12 that predesign investigation and then  
13 do an actual design, remedial design  
14 for the site.

15 It's anticipated they will  
16 need to construct a temporary road  
17 to maintain access to the torpedo  
18 shops and the weapons center which are  
19 located east on Triton Road.

20 They would go in and  
21 excavate the contaminated soil,  
22 characterize it with some  
23 verification -- with testing and then  
24 they would take it off site and

1        dispose of it. There's a possibility,  
2        if they can, they would recycle it  
3        through asphalt paving plants or  
4        something like that.

5                    They might be able to  
6        recycle that material.

7                    In the bottom of the  
8        excavation itself, they will collect  
9        verification samples to make sure they  
10       meet the 500 milligram per kilogram  
11       cleanup goal, and they'll restore the  
12       site to its preexcavation conditions.

13                   The whole process of  
14       design and remediation is anticipated  
15       to take a year and a half. The actual  
16       in-field excavation work would take  
17       about two to three months.

18                   So moving on to the next  
19       site, Site 7, which is part of  
20       Operable Unit 8, there are several  
21       buildings that are designated as the  
22       torpedo shops in the northern portion  
23       of New London. The Navy conducts  
24       maintenance activities at these

1 buildings for torpedos. They use  
2 solvents and petroleum products.  
3 Through that process, they store them  
4 there and also use them.

5 Next slide. This is just  
6 a picture of Building 325, one of the  
7 larger buildings of the four and one  
8 of the main areas where maintenance  
9 activities are completed.

10 This is also a picture of  
11 Building 450. Again, one of the  
12 larger buildings where maintenance  
13 activities are completed.

14 The site was investigated  
15 During three different phases: The  
16 Phase 1 RI back in the early '90s, the  
17 Phase 2 RI in the mid '90s, and  
18 basewide groundwater OU RI in early  
19 2000.

20 Soil data was reevaluated  
21 in our RI update and feasibility study  
22 this year and, in general, we found  
23 during our investigations two areas  
24 of contamination, one being an area



1 contaminated with polynuclear aromatic  
2 hydrocarbons, that being south of  
3 Building 325.

4 And it looks like this is  
5 related to some former leakage or  
6 spillage of some fuel oil tanks in  
7 that area, and it looks like there's  
8 possibly 1,700 cubic yards of  
9 contaminated soil in that area.

10 We also have on the  
11 western side of Building 325 an area  
12 of contamination or suspected  
13 contamination. We found some  
14 groundwater contamination in that area  
15 just adjacent to a former septic tank  
16 that was used until the early 1980s,  
17 and it looks like there may be  
18 residual contamination in that area  
19 leaching into the groundwater and  
20 causing a problem.

21 Excuse me. Yeah, we can  
22 take a look at the figure.

23 This figure is from the  
24 feasibility study and just shows those

1 two areas in a little more detail.  
2 This is the PAH contamination area  
3 with cross-hatching on it. We had two  
4 hits generally in the subsurface.

5 This sample was from 1 to  
6 3 feet, and this one is from 6 to 8  
7 feet below -- no, that's 1 to 3 as  
8 well.

9 Contaminant levels are  
10 around 1,700 to 2,000 micrograms per  
11 kilogram range, which exceed  
12 Connecticut's cleanup goals.

13 And then the septic tank  
14 area is over here. There was a septic  
15 tank and that drained off into this  
16 leach field, and we believe that that  
17 historic septic tank is still in place  
18 and maybe has some sludge or something  
19 in there that's acting as a source.

20 We went through the risk  
21 assessment process and the PAH soil  
22 poses a potential contaminant  
23 migration issue as well as potential  
24 risks to human receptors, and the

1 solvent area causes a definite --  
2 causes risks to human receptors  
3 through groundwater at this point in  
4 time. The soil data didn't confirm a  
5 risk from the soil, but we're going to  
6 confirm that information.

7 No significant ecological  
8 risks based on the site. As you saw  
9 on those pictures, most of the site is  
10 paved. The ecological receptors  
11 really don't have access to the site.

12 So our contaminants of  
13 concern for the soil are the PAHs, the  
14 benzo(a)anthracene, benzo(a)pyrene,  
15 benzo(b)fluoranthene, and  
16 indeno(1,2,3-cd)pyrene, and then the  
17 solvents, the benzene, chlorobenzene,  
18 and 1,4-dichlorobenzene.

19 The remedial action  
20 objectives that we came up with, very  
21 similar to the other ones that we had  
22 for Site 3. We want to protect  
23 current receptors from the  
24 contaminated soil, protect the

1 groundwater from contaminants in the  
2 soil leeching to it, protect any  
3 aquatic receptors.

4 We generally didn't have  
5 any of these main issues, but we still  
6 wanted to state that we're protecting  
7 them and we also want to protect any  
8 future receptors if this facility  
9 would be shut down and this would be  
10 reused for residential purposes.

11 We have came up with three  
12 very similar alternatives as we had  
13 for Site 3 new source area, a  
14 no-action, which is mandatory under  
15 five-year reviews.

16 Because we had some additional  
17 contaminants, CERCLA contaminants of  
18 concern, we would have to do five-year  
19 reviews under a no-action scenario and  
20 that would give us a cost compared to  
21 the Site 3 new source area which had  
22 none.

23 Alternative 2 is a passive  
24 institutional controls alternative

1 prohibiting access to the site,  
2 allowing natural degradation to occur,  
3 conducting our reviews and doing  
4 periodic testing.

5 And then Alternative 3  
6 would be excavation and off-site  
7 disposal.

8 The cost for Alternative 2  
9 is \$98,000.

10 Alternative 3,  
11 approximately \$440,000.

12 We screened all the  
13 alternatives with a similar set of  
14 criteria, and the Navy's preferred  
15 remedy for the soil at Site 7 is  
16 Alternative S3, which is excavation  
17 and off-site disposal.

18 They will do some  
19 additional characterization to  
20 finalize the delineation of the  
21 contaminated soil, and they want to  
22 locate and sample any contents in the  
23 septic tank. That will be done as  
24 part of a predesign investigation.

1                   They'll conduct a remedial  
2           design and then the actual remedial  
3           action will include excavation,  
4           characterization, transportation, and  
5           disposal of the contaminated soil and  
6           tank off site and verification  
7           sampling to confirm that we've gotten  
8           all the contaminated soil out of the  
9           ground. Then restore the site and  
10          similar time frames for the total  
11          project duration and remedial action.

12                   These are the remedial  
13          goals for the soil at Site 7. These  
14          goals are based on Connecticut  
15          remediation standards. They meet both  
16          direct exposure and contaminant  
17          migration concerns.

18                   Site 7 is one part of OU8.  
19          The other part of Operable Unit 8 is  
20          overbank disposal area northeast,  
21          which is OBDANE for abbreviation.

22                   Site 14 is located  
23          adjacent to Sites 3 and 7. It was a  
24          small disposal area where

1        miscellaneous waste was dumped over  
2        the edge of a ravine in the past.  
3        This is a picture of the site, I  
4        believe in early or maybe late 2000  
5        early 2001. This was after Stream 3  
6        was remediated as part of the OU3  
7        remedial effort.

8                    The site was originally  
9        investigated during two phases in the  
10       early and mid 1990s. We found some  
11       low level VOCs, volatile organic  
12       compounds, PAHs and pesticides, and  
13       some slightly higher levels of  
14       inorganics, in particular, arsenic and  
15       lead.

16                   Taking that information  
17       into the risk assessment, we didn't  
18       see any significant risks to human  
19       health related to those contaminants,  
20       but we did see some risk to ecological  
21       receptors because of those  
22       contaminants of concern. So our  
23       contaminants of concern for this site  
24       were pesticides and inorganics, and

1 originally the Phase 2 RI recommended  
2 that we do some further  
3 characterization, but -- next slide.

4 The Navy opted to go in  
5 and do a removal action at the site  
6 and they performed an engineering  
7 evaluation and cost analysis which is  
8 a streamlined feasibility study and  
9 then signed an action memorandum for  
10 that site which is a kind of a  
11 streamlined record of decision for a  
12 removal action.

13 They went in and completed  
14 that removal action in 2001. They  
15 took out about 270 tons of debris and  
16 contaminated soil and disposed of that  
17 off site.

18 They selected remedial  
19 goals for pesticides and inorganics  
20 from both the State of Connecticut  
21 criteria and previously selected  
22 remedial goals that were used during  
23 the Site 3 removal -- remedial action  
24 that was conducted, and those Site 3



1 goals were based on ecological  
2 receptors which was the concern that  
3 was identified for Site 14.

4 You want to look at the  
5 figure quick, Mark. If you go down  
6 and fit the -- This figure just gives  
7 you a plan view, and this line  
8 outlines the limit of excavation for  
9 the removal action. And this is  
10 Stream 3, the stream that was visible  
11 on that earlier figure. This is  
12 upper pond. This is Triton Road.

13 And this picture shows us  
14 postremoval action. That area has  
15 been cleaned up, reseeded, and you can  
16 still see some of the silt fence down  
17 along the lower edge of the site.

18 So since the removal  
19 action was done and all the debris and  
20 contaminated soil has been removed,  
21 the Navy proposes no further action  
22 for this site under CERCLA and this  
23 site will be written off then.

24 So that was OU8.

1                   Now we are going to move  
2           on to Operable Unit 11. This was  
3           another proposed plan. The two sites  
4           included are Sites 16, the hospital  
5           incinerators, and site 18, the solvent  
6           storage area of Building 33. I'll  
7           talk about Site 16 first.

8                   Site 16 consisted of two  
9           locations where a mobile incinerator  
10          was used next to the hospital.

11                   Want to look at the figure  
12          there, Mark?

13                   The main hospital area is  
14          Building 449. Based on best  
15          information available, the incinerator  
16          was used in this area and also over on  
17          the edge of the parking lot in this  
18          area back in the '80s, I guess, late  
19          '70s time frame.

20                   And it was -- the  
21          incinerator was used to destroy  
22          medical records and medical waste.  
23          And from what everybody -- from all  
24          records and information that we

1        have received, the ash was disposed of  
2        off site at a municipal landfill. So  
3        we weren't really expecting  
4        significant issues at this site, but  
5        we wanted to go through the process  
6        and evaluate it.

7                    These are just two  
8        pictures of those areas that we  
9        outlined on the plan view drawing.  
10       This is Location A and this is  
11       Location B.

12                   This site was actually  
13       looked at back in the early '80s under  
14       the initial assessment study.

15                   It was recommended at the  
16       time to delay any further  
17       investigation because it was still  
18       operational and they were still using  
19       it. They ceased operation in the  
20       late '80s, early '90s, and we  
21       investigated this site in early 2000.

22                   Some soil samples were  
23       collected at the site and analyzed for  
24       organic compounds, pesticides, PCBs,

1 dioxins/furans, inorganics, and we  
2 also did some leachability testing on  
3 the soil samples.

4 We also went through risk  
5 assessment, mainly a human health risk  
6 assessment, and the data did not show  
7 a significant risk to human receptors.  
8 The site itself doesn't provide any  
9 significant suitable ecological  
10 habitat so we didn't conduct an  
11 ecological risk assessment.

12 We did, through our data  
13 screening, identify some potential  
14 contaminant migration concerns with  
15 contaminated soil possibly impacting  
16 groundwater.

17 We took a look at some  
18 background concentrations and the  
19 leachability test results and used  
20 that information to show there really  
21 weren't any significant concerns  
22 related to those potential  
23 contaminants.

24 The Navy recommends no

1 further action for Site 16 soil based  
2 on the information that's available.  
3 And they will pursue that, no further  
4 action.

5 Site 18, the other part or  
6 other site included in Operable Unit  
7 11, is located in the southern part of  
8 New London just north of Sites 15  
9 and 23. Just give you a quick look at  
10 Site 18 is down here, Site 16 is up  
11 here.

12 This figure shows you some  
13 of the sample locations that were used  
14 to evaluate the site, and then Site 15  
15 is spent acid storage and disposal  
16 area and the tank farm, Site 23, were  
17 located south of the site.

18 The building was used for  
19 storage of gas cylinders and 55-gallon  
20 drums of solvents such as TCE or  
21 trichloroethylene or dichloroethylene.  
22 This gives you a picture, just an old  
23 warehouse.

24 We investigated the site

1           in early 2000, collected soil samples,  
2           analyzed them for broad range of  
3           compounds and also did some  
4           leachability tests and, in general, we  
5           didn't find much contamination at all  
6           in the soil out at the site. Some low  
7           concentrations of volatile organic  
8           compounds and polynuclear aromatic  
9           hydrocarbon and some inorganics, but  
10          this is one of the cleanest area on  
11          the facility.

12                       We didn't see any  
13          significant risks to human health from  
14          the building in general, and this  
15          surrounding parking lot didn't provide  
16          an ecological habitat so no ecological  
17          risk assessments were completed. And  
18          we didn't see any potential migration  
19          issues from the contaminants found in  
20          the site.

21                       So the Navy's preferred  
22          alternative for this site is no action  
23          because no significant risk or  
24          environmental concerns.

1                   So those are the Navy's  
2                   preferred remedies. We are in the  
3                   middle of the public comment period  
4                   right now. The comment period started  
5                   on July 16 with the issuance of a  
6                   public notice in The Day newspaper and  
7                   we'll wind up on August 17.

8                   We are currently  
9                   conducting the public meeting.

10                  Once the public comment  
11                  period is over, if there are any  
12                  comments received, the Navy will put  
13                  together a responsiveness summary  
14                  which is formal responses to any of  
15                  the comments received and that  
16                  information will get incorporated into  
17                  the records of decision.

18                  And we hope to have our  
19                  records of decision -- there will be  
20                  three separate ones associated with  
21                  these three proposed plans -- out in  
22                  the September to October 2004 time  
23                  frame.

24                  Points of contact, these

1 Folks are all in attendance tonight:  
2 Mr. Mark Evans provided our  
3 introduction; Ms. Melissa Cokas is at  
4 the subbase in charge of the  
5 environmental program there; Ms.  
6 Kymberlee Keckler from the EPA; and  
7 Mr.  
8 Mark Lewis from the State of  
9 Connecticut.

10 That's the end of the  
11 technical presentation. With no  
12 comments during the presentation, do  
13 we want to open the floor for any  
14 formal comments from the public?

15 MR. GIBSON: Larry Gibson.  
16 It was a very good and comprehensive  
17 presentation, and I agree with all the  
18 decisions that have been recommended  
19 so far.

20 MR. EVANS: Thank you.

21 MR. PROKOP: For the record,  
22 my name is Felix Prokop. I'm with the  
23 Ledyard Health District. And we cover  
24 the Town of Groton and, in the last



1       year or two, we cover Ledyard. In  
2       early February, we have been taken  
3       over as far as the environmental  
4       health, the wells, the septic system,  
5       and things like that, and I've been to  
6       these meetings for years as you guys  
7       know.

8                       Was there any problems on  
9       the Groton site or Ledyard site, you  
10      know, Route 12, Military Highway, Long  
11      Cove, any problem with well  
12      contamination?

13                     I remember some years ago,  
14      some wells claimed they had a boron  
15      problem. I remember -- I forgot, this  
16      happened so many years ago, I did take  
17      samples for boron for somebody in the  
18      public and there didn't tend to be  
19      much.

20                     Was there any problem in  
21      those wells that you know of?

22                     MR. EVANS: No. There was,  
23      I think it was way back in the Phase 1  
24      RI that Atlantic completed, boron was

1           showing up at high levels in every  
2           sample they took or a lot of samples  
3           they took.

4                   MR. PROKOP:   Where were  
5           they -- in what?   On the base?

6                   MR. EVANS:   Mainly the  
7           monitoring wells.   I don't think they  
8           ever saw any residential wells.   Most  
9           of the residential wells were gone by  
10          then or starting to be decommissioned.

11                   MR. PROKOP:   Shortly after  
12          that, the water line --

13                   MR. EVANS:   Then the water  
14          line came up to Route 12, yeah.   The  
15          boron only showed up on that one round  
16          and all indications were it was some  
17          sort of lab contaminant screwup at  
18          that time.

19                   MR. PROKOP:   But the best  
20          you know, there was no contaminated  
21          wells?

22                   MR. EVANS:   No.   Remember up  
23          on Route 12, there were some  
24          residences up there on the northern

1           end that the Navy bought all that  
2           property because it was in the  
3           explosive arc?

4                     Other than that, I don't  
5           think we know of any residential wells  
6           still.

7                     MR. PROKOP: I mean, nobody  
8           had to tie into public water  
9           because -- because I went through  
10          those records pretty thorough and I  
11          didn't see anything.

12                    MR. EVANS: I don't think so  
13          either.

14                    MR. PROKOP: Okay.

15                    MR. EVANS: The other thing  
16          is most of the groundwater flows from  
17          the sub base towards the Thames River,  
18          away from --

19                    MR. RICH: There's very  
20          little, if any, flow off property in  
21          that direction.

22                    MR. PROKOP: Was there any  
23          surveys done in that area? Did  
24          anybody do any spot wells in that

1 area?

2 MR. RICH: The Navy did.

3 MR. EVANS: Seems we did  
4 during Phase 2. I think during Phase  
5 2 RI, we did some of that work.

6 MR. PROKOP: Do you remember  
7 where?

8 MR. EVANS: No.

9 MR. RICH: There's a report.

10 MR. EVANS: A separate  
11 report?

12 MR. RICH: Yeah, that  
13 Atlantic prepared. There's probably a  
14 dozen or more public wells that were  
15 sampled.

16 MR. PROKOP: Public or  
17 private?

18 MR. RICH: Private, I'm  
19 sorry.

20 MR. EVANS: Yeah, it's  
21 coming back to me now that we did do a  
22 report like that.

23 MR. PROKOP: That's all I  
24 have.

1 MR. EVANS: Those reports  
2 are probably in the admin record now.  
3 We have updated that.

4 Did you put a copy of that  
5 in the library yet?

6 MS. COKAS: No.

7 MR. EVANS: We've updated  
8 those CDS.

9 I think we're up to 13 CDs  
10 that have every document that we've  
11 ever prepared. As soon as that's  
12 finalized, those will be in the two  
13 libraries.

14 You can go in there and  
15 take a look at any of those documents.  
16 It's pretty easy to search the stuff  
17 on them.

18 MR. PROKOP: I'm the only  
19 guy in the office without a computer.  
20 Leave it that way. But I'm sure if  
21 there was a problem, it would have  
22 been --

23 MR. EVANS: We can use the  
24 library's computers for those, right?

1 MS. COKAS: I believe so. I  
2 wasn't there when they brought the  
3 first set, so I didn't really talk to  
4 the library about it.

5 MR. RICH: If that's all the  
6 questions, then --

7 MR. EVANS: We'll stick  
8 around a little bit if you guys want  
9 to take a look at the posters and  
10 stuff.

11 MR. RICH: The meeting is  
12 adjourned.

13 (THEREUPON, THE HEARING WAS  
14 CONCLUDED AT 7:24 P.M.)  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24

## CERTIFICATE

I hereby certify that said hearing was taken by me stenographically in the presence of counsel and reduced to typewriting under my direction, and the foregoing is a true and accurate transcript of hearing.

I further certify that I am neither of counsel nor attorney to any of the parties of said cause, nor am I an employee of either party to said cause, nor of either counsel in said cause, nor am I interested in the outcome of said cause.

Witness my hand and seal as Notary Public this 30<sup>th</sup> day of August, 2004.

Clifford Edwards  
Clifford Edwards

Notary Public

My commission expires: 9/30/2006

**APPENDIX D**

**HUMAN HEALTH RISK ASSESSMENT  
RAGS PART D  
TABLES**



**LIST OF TABLES**  
**RAGS PART D TABLE 9**  
**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs**

**Table No.**

**REASONABLE MAXIMUM EXPOSURES**

9.1.RME	Construction Workers - Site 16
9.2.RME	Full-Time Employees - Site 16
9.3.RME	Older Child Trespasser - Site 16
9.4.RME	Child Residents - Site 16
9.5.RME	Adult Residents - Site 16
9.6.RME	Construction Workers - Site 18
9.7.RME	Full-Time Employees - Site 18
9.8.RME	Older Child Trespasser - Site 18
9.9.RME	Child Residents - Site 18
9.10.RME	Adult Residents - Site 18

**CENTRAL TENDENCY EXPOSURES**

9.1.CTE	Construction Workers - Site 16
9.2.CTE	Full-Time Employees - Site 16
9.3.CTE	Older Child Trespasser - Site 16
9.4.CTE	Child Residents - Site 16
9.5.CTE	Adult Residents - Site 16
9.6.CTE	Construction Workers - Site 18
9.7.CTE	Full-Time Employees - Site 18
9.8.CTE	Older Child Trespasser - Site 18
9.9.CTE	Child Residents - Site 18
9.10.CTE	Adult Residents - Site 18

TABLE 9.1.RME  
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCS  
REASONABLE MAXIMUM EXPOSURE  
BASEWIDE GROUNDWATER OPERABLE UNIT REMEDIAL INVESTIGATION  
NSB-NLON, GROTON, CONNECTICUT

Scenario Timeframe: Future  
Receptor Population: Construction Workers  
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient					
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total	
Surface/Subsurface Soil	Surface/Subsurface Soil	Hospital Incinerators (Site 16)	Benzo(a)pyrene	7.8E-08	--	1.6E-08	--	9.4E-08	NA	--	--	--	--	
			Arsenic	4.1E-07	--	2.0E-08	--	4.3E-07	Skin	0.06	--	0.003	0.07	
			Manganese (Soil)	--	--	--	--	--	CNS	0.006	--	--	0.006	
			Thallium	--	--	--	--	--	None Specified	0.04	--	--	0.04	
			Chemical Total	4.9E-07	--	3.5E-08	--	5.2E-07		0.1	--	0.003	0.1	
		Exposure Point Total						5.2E-07						0.1
		Exposure Medium Total						5.2E-07						0.1
Medium Total						5.2E-07						0.1		
Receptor Total						5.2E-07						0.1		

From Basewide Groundwater Operable Unit Remedial Investigation (TINUS, 2002a).

TABLE 9.2.RME  
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs  
REASONABLE MAXIMUM EXPOSURE  
BASEWIDE GROUNDWATER OPERABLE UNIT REMEDIAL INVESTIGATION  
NSB-NLON, GROTON, CONNECTICUT

Scenario Timeframe: Future  
Receptor Population: Full-Time Employees  
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient					
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total	
Surface Soil	Surface Soil	Hospital Incinerators (Site 16)	Benzo(a)pyrene	5.1E-07	--	5.0E-07	--	1.0E-06	NA	--	--	--	--	
			Arsenic	2.7E-06	--	6.1E-07	--	3.3E-06	Skin	0.02	--	0.004	0.02	
			Manganese (Soil)	--	--	--	--	--	CNS	0.002	--	--	0.002	
			Thallium	--	--	--	--	--	None Specified	0.01	--	--	0.01	
			Chemical Total	3.2E-06	--	1.1E-06	--	4.3E-06		0.03	--	0.004	0.03	
		Exposure Point Total						4.3E-06					0.03	
		Exposure Medium Total						4.3E-06					0.03	
Medium Total									4.3E-06					0.03
Receptor Total				Receptor Risk Total					4.3E-06	Receptor HI Total				0.03

From Basewide Groundwater Operable Unit Remedial Investigation (TINUS, 2002a).

TABLE 9.3.RME  
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs  
REASONABLE MAXIMUM EXPOSURE  
BASEWIDE GROUNDWATER OPERABLE UNIT REMEDIAL INVESTIGATION  
NSB-NLON, GROTON, CONNECTICUT

Scenario Timeframe: Future  
Receptor Population: Older Child Trespasser  
Receptor Age: Adolescent

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient					
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total	
Surface Soil	Surface Soil	Hospital Incinerators (Site 16)	Benzo(a)pyrene	2.6E-07	--	2.2E-07	--	4.8E-07	NA	--	--	--	--	
			Arsenic	1.4E-06	--	2.6E-07	--	1.7E-06	Skin	0.02	--	0.004	0.03	
			Manganese (Soil)	--	--	--	--	--	CNS	0.002	--	--	0.002	
			Thallium	--	--	--	--	--	None Specified	0.01	--	--	0.01	
			Chemical Total	1.7E-06	--	4.8E-07	--	2.1E-06		0.04	--	0.004	0.04	
		Exposure Point Total								0.04				
		Exposure Medium Total								0.04				
Medium Total								0.04						
Receptor Total			Receptor Risk Total					Receptor HI Total						
			2.1E-06					0.04						

From Basewide Groundwater Operable Unit Remedial Investigation (TINUS, 2002a).

TABLE 9.4.RME  
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs  
REASONABLE MAXIMUM EXPOSURE  
BASEWIDE GROUNDWATER OPERABLE UNIT REMEDIAL INVESTIGATION  
NSB-NLON, GROTON, CONNECTICUT

Scenario Timeframe: Future  
Receptor Population: Child Residents  
Receptor Age: Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Surface/Subsurface Soil	Surface/Subsurface Soil	Hospital Incinerators (Site 16)	Benzo(a)pyrene	1.1E-06	--	3.1E-07	--	1.4E-06	NA	--	--	--	--
			Arsenic	6.0E-06	--	3.8E-07	--	6.4E-06	Skin	0.2	--	0.01	0.2
			Manganese (Soil)	--	--	--	--	--	CNS	0.02	--	--	0.02
			Thallium	--	--	--	--	--	None Specified	0.09	--	--	0.09
			Chemical Total	7.1E-06	--	6.8E-07	--	7.8E-06		0.3	--	0.01	0.3
		Exposure Point Total							7.8E-06				
	Exposure Medium Total							7.8E-06					0.3
Medium Total							7.8E-06					0.3	
Receptor Total			Receptor Risk Total				7.8E-06	Receptor HI Total				0.3	

From Basewide Groundwater Operable Unit Remedial Investigation (TINUS, 2002a).

TABLE 9.5.RME  
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs  
REASONABLE MAXIMUM EXPOSURE  
BASEWIDE GROUNDWATER OPERABLE UNIT REMEDIAL INVESTIGATION  
NSB-NLON, GROTON, CONNECTICUT

Scenario Timeframe: Future  
Receptor Population: Adult Residents  
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Surface/Subsurface Soil	Surface/Subsurface Soil	Hospital Incinerators (Site 16)	Benzo(a)pyrene	4.8E-07	--	1.7E-07	--	6.5E-07	NA	--	--	--	--
			Arsenic	2.6E-06	--	2.0E-07	--	2.8E-06	Skin	0.02	--	0.001	0.02
			Manganese (Soil)	--	--	--	--	--	CNS	0.002	--	--	0.002
			Thallium	--	--	--	--	--	None Specified	0.01	--	--	0.01
			Chemical Total	3.1E-06	--	3.7E-07	--	3.4E-06		0.03	--	0.001	0.03
		Exposure Point Total						3.4E-06					0.03
	Exposure Medium Total							3.4E-06					0.03
Medium Total								3.4E-06					0.03
Receptor Total								Receptor Risk Total 3.4E-06					Receptor HI Total 0.03

From Basewide Groundwater Operable Unit Remedial Investigation (TINUS, 2002a).

TABLE 9.6.RME  
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs  
REASONABLE MAXIMUM EXPOSURE  
BASEWIDE GROUNDWATER OPERABLE UNIT REMEDIAL INVESTIGATION  
NSB-NLON, GROTON, CONNECTICUT

Scenario Timeframe: Future  
Receptor Population: Construction Workers  
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	ingestion	inhalation	Dermal	Exposure Routes Total
Surface/Subsurface Soil	Surface/Subsurface Soil	Solvent Storage Area (Site 18)	Arsenic	1.9E-07	--	9.2E-09	--	2.0E-07	Skin	0.03	--	0.001	0.03
			Lead	--	--	--	--	NA	--	--	--	--	
			Manganese (soil)	--	--	--	--	CNS	0.002	--	--	0.002	
			Thallium	--	--	--	--	None Specified	0.02	--	--	0.02	
			Chemical Total	1.9E-07	--	9.2E-09	--	2.0E-07		0.05	--	0.001	0.05
		Exposure Point Total					2.0E-07					0.05	
		Exposure Medium Total					2.0E-07					0.05	
Medium Total					2.0E-07					0.05			
Receptor Total					2.0E-07					0.05			
Receptor Risk Total								2.0E-07	Receptor HI Total				0.05

From Basewide Groundwater Operable Unit Remedial Investigation Report (TINUS, 2002a).

TABLE 9.7.RME  
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs  
REASONABLE MAXIMUM EXPOSURE  
BASEWIDE GROUNDWATER OPERABLE UNIT REMEDIAL INVESTIGATION  
NSB-NLON, GROTON, CONNECTICUT

Scenario Timeframe: Future  
Receptor Population: Full-Time Employees  
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient					
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total	
Surface Soil	Surface Soil	Solvent Storage Area (Site 18)	Arsenic	1.3E-06	--	2.9E-07	--	1.5E-06	Skin	0.008	--	0.002	0.010	
			Lead	--	--	--	--	NA	--	--	--	--		
			Thallium	--	--	--	--	None Specified	0.005	--	--	0.005		
			Chemical Total	1.3E-06	--	2.9E-07	--	1.5E-06		0.01	--	0.002	0.01	
		Exposure Point Total						1.5E-06						0.01
		Exposure Medium Total								1.5E-06				
Medium Total								1.5E-06						0.01
Receptor Total			Receptor Risk Total					1.5E-06	Receptor HI Total					0.01

From Basewide Groundwater Operable Unit Remedial Investigation Report (TINUS, 2002a).



TABLE 9.8.RME  
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs  
REASONABLE MAXIMUM EXPOSURE  
BASEWIDE GROUNDWATER OPERABLE UNIT REMEDIAL INVESTIGATION  
NSB-NLON, GROTON, CONNECTICUT

Scenario Timeframe: Future  
Receptor Population: Older Child Trespasser  
Receptor Age: Adolescent

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient					
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total	
Surface Soil	Surface Soil	Solvent Storage Area (Site 18)	Arsenic	6.6E-07	--	1.2E-07	--	7.8E-07	Skin	0.01	--	0.002	0.01	
			Lead	--	--	--	--	NA	--	--	--	--		
			Thallium	--	--	--	--	None Specified	0.007	--	--	0.007		
			Chemical Total	6.6E-07	--	1.2E-07	--	7.8E-07		0.02	--	0.002	0.02	
		Exposure Point Total						7.8E-07						0.02
		Exposure Medium Total						7.8E-07						0.02
Medium Total						7.8E-07						0.02		
Receptor Total						7.8E-07						0.02		
Receptor Risk Total								7.8E-07	Receptor HI Total					0.02

From Basewide Groundwater Operable Unit Remedial Investigation Report (TINUS, 2002a).

TABLE 9.9.RME  
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs  
REASONABLE MAXIMUM EXPOSURE  
BASEWIDE GROUNDWATER OPERABLE UNIT REMEDIAL INVESTIGATION  
NSB-NLON, GROTON, CONNECTICUT

Scenario Timeframe: Future  
Receptor Population: Child Residents  
Receptor Age: Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient					
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total	
Surface/Subsurface Soil	Surface/Subsurface Soil	Solvent Storage Area (Site 18)	Arsenic	2.8E-06	--	1.8E-07	--	3.0E-06	Skin	0.07	--	0.005	0.08	
			Lead	--	--	--	--	--	NA	--	--	--	--	
			Manganese (soil)	--	--	--	--	--	CNS	0.006	--	--	0.006	
			Thallium	--	--	--	--	--	None Specified	0.04	--	--	0.04	
			Chemical Total	2.8E-06	--	1.8E-07	--	3.0E-06		0.1	--	0.005	0.1	
		Exposure Point Total								3.0E-06				0.1
		Exposure Medium Total								3.0E-06				0.1
Medium Total								3.0E-06				0.1		
Receptor Total			Receptor Risk Total					3.0E-06	Receptor HI Total					0.1

From Basewide Groundwater Operable Unit Remedial Investigation Report (TINUS, 2002a).

TABLE 9.10.RME  
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs  
REASONABLE MAXIMUM EXPOSURE  
BASEWIDE GROUNDWATER OPERABLE UNIT REMEDIAL INVESTIGATION  
NSB-NLON, GROTON, CONNECTICUT

Scenario Timeframe: Future  
Receptor Population: Adult Residents  
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient						
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total		
Surface/Subsurface Soil	Surface/Subsurface Soil	Solvent Storage Area (Site 18)	Arsenic	1.2E-06	--	9.6E-08	--	1.3E-06	Skin	0.008	--	0.0006	0.008		
			Lead	--	--	--	--	NA	--	--	--	--			
			Manganese (soil)	--	--	--	--	CNS	0.0006	--	--	0.0006			
			Thallium	--	--	--	--	None Specified	0.005	--	--	0.005			
			Chemical Total	1.2E-06	--	9.6E-08	--	1.3E-06		0.01	--	0.0006	0.01		
		Exposure Point Total						1.3E-06					0.01		
		Exposure Medium Total								1.3E-06					0.01
		Medium Total								1.3E-06					0.01
Receptor Total			Receptor Risk Total					1.3E-06	Receptor HI Total				0.01		

From Basewide Groundwater Operable Unit Remedial Investigation Report (TINUS, 2002a).

TABLE 9.1.CTE  
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs  
CENTRAL TENDENCY EXPOSURE  
BASEWIDE GROUNDWATER OPERABLE UNIT REMEDIAL INVESTIGATION  
NSB-NLON, GROTON, CONNECTICUT

Scenario Timeframe: Future  
Receptor Population: Construction Workers  
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient					
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total	
Surface/Subsurface Soil	Surface/Subsurface Soil	Hospital Incinerators (Site 16)	Benzo(a)pyrene	9.0E-09	--	3.7E-10	--	9.4E-09	NA	--	--	--	--	
			Arsenic	6.6E-08	--	6.2E-10	--	6.6E-08	Skin	0.01	--	0.0001	0.01	
			Manganese (Soil)	--	--	--	--	--	CNS	0.0009	--	--	0.001	
			Thallium	--	--	--	--	--	None Specified	0.006	--	--	0.01	
			Chemical Total	7.5E-08	--	9.9E-10	--	7.6E-08		0.02	--	0.0001	0.02	
		Exposure Point Total						7.6E-08					0.02	
	Exposure Medium Total								7.6E-08					0.02
Medium Total									7.6E-08					0.02
Receptor Total				Receptor Risk Total					7.6E-08	Receptor HI Total				0.02

From Basewide Groundwater Operable Unit Remedial Investigation (TINUS, 2002a).

TABLE 9.2.CTE  
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCS  
CENTRAL TENDENCY EXPOSURE  
BASEWIDE GROUNDWATER OPERABLE UNIT REMEDIAL INVESTIGATION  
NSB-NLON, GROTON, CONNECTICUT

Scenario Timeframe: Future  
Receptor Population: Full-Time Employees  
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Surface Soil	Surface Soil	Hospital Incinerators (Site 16)	Benzo(a)pyrene	2.2E-08	--	4.3E-09	--	2.6E-08	NA	--	--	--	--
			Arsenic	1.5E-07	--	6.9E-09	--	1.6E-07	Skin	0.004	--	0.0002	0.004
			Manganese (Soil)	--	--	--	--	--	CNS	0.0004	--	--	0.0004
			Thallium	--	--	--	--	--	None Specified	0.003	--	--	0.003
			Chemical Total	1.7E-07	--	1.1E-08	--	1.9E-07		0.007	--	0.0002	0.007
		Exposure Point Total					1.9E-07					0.007	
	Exposure Medium Total							1.9E-07					0.007
Medium Total							1.9E-07					0.007	
Receptor Total							1.9E-07					0.007	
Receptor Risk Total								1.9E-07	Receptor HI Total				0.007

From Basewide Groundwater Operable Unit Remedial Investigation Report (TINUS, 2002a).

TABLE 9.3.CTE  
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs  
CENTRAL TENDENCY EXPOSURE  
BASEWIDE GROUNDWATER OPERABLE UNIT REMEDIAL INVESTIGATION  
NSB-NLON, GROTON, CONNECTICUT

Scenario Timeframe: Future  
Receptor Population: Older Child Trespasser  
Receptor Age: Adolescent

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Surface Soil	Surface Soil	Hospital Incinerators (Site 16)	Benzo(a)pyrene	6.2E-09	--	3.0E-09	--	9.2E-09	NA	--	--	--	--
			Arsenic	4.3E-08	--	4.9E-09	--	4.8E-08	Skin	0.002	--	0.0003	0.002
			Manganese (Soil)	--	--	--	--	--	CNS	0.0002	--	--	0.0002
			Thallium	--	--	--	--	--	None Specified	0.001	--	--	0.001
			Chemical Total	4.9E-08	--	7.9E-09	--	5.7E-08		0.004	--	0.0003	0.004
		Exposure Point Total											0.004
		Exposure Medium Total											0.004
Medium Total												0.004	
Receptor Total			Receptor Risk Total					5.7E-08	Receptor HI Total				0.004

From Basewide Groundwater Operable Unit Remedial Investigation Report (TINUS, 2002a).

TABLE 9.4.CTE  
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs  
CENTRAL TENDENCY EXPOSURE  
BASEWIDE GROUNDWATER OPERABLE UNIT REMEDIAL INVESTIGATION  
NSB-NLON, GROTON, CONNECTICUT

Scenario Timeframe: Future  
Receptor Population: Child Residents  
Receptor Age: Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Surface/Subsurface Soil	Surface/Subsurface Soil	Hospital Incinerators (Site 16)	Benzo(a)pyrene	6.6E-08	--	1.1E-08	--	7.6E-08	NA	--	--	--	--
			Arsenic	4.8E-07	--	1.8E-08	--	5.0E-07	Skin	0.04	--	0.001	0.04
			Manganese (Soil)	--	--	--	--	--	CNS	0.003	--	--	0.003
			Thallium	--	--	--	--	--	None Specified	0.02	--	--	0.02
			Chemical Total	5.4E-07	--	2.9E-08	--	5.7E-07		0.06	--	0.001	0.07
		Exposure Point Total						5.7E-07					0.07
	Exposure Medium Total							5.7E-07					0.07
Medium Total								5.7E-07					0.07
Receptor Total				Receptor Risk Total				5.7E-07	Receptor HI Total				0.07

From Basewide Groundwater Operable Unit Remedial Investigation Report (TINUS, 2002a).

TABLE 9.5.CTE  
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs  
CENTRAL TENDENCY EXPOSURE  
BASEWIDE GROUNDWATER OPERABLE UNIT REMEDIAL INVESTIGATION  
NSB-NLON, GROTON, CONNECTICUT

Scenario Timeframe: Future  
Receptor Population: Adult Residents  
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Surface/Subsurface Soil	Surface/Subsurface Soil	Hospital Incinerators (Site 16)	Benzo(a)pyrene	2.5E-08	--	2.4E-09	--	2.7E-08	NA	--	--	--	--
			Arsenic	1.8E-07	--	4.1E-09	--	1.8E-07	Skin	0.004	--	0.00009	0.004
			Manganese (Soil)	--	--	--	--	--	CNS	0.0004	--	--	0.0004
			Thallium	--	--	--	--	--	None Specified	0.002	--	--	0.002
			Chemical Total	2.0E-07	--	6.5E-09	--	2.1E-07		0.007	--	0.00009	0.007
		Exposure Point Total					2.1E-07					0.007	
	Exposure Medium Total							2.1E-07				0.007	
Medium Total							2.1E-07				0.007		
Receptor Total							2.1E-07				0.007		
Receptor Risk Total								2.1E-07	Receptor HI Total				0.007

From Basewide Groundwater Operable Unit Remedial Investigation Report (TINUS, 2002a).



TABLE 9.6.CTE  
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs  
CENTRAL TENDENCY EXPOSURE  
BASEWIDE GROUNDWATER OPERABLE UNIT REMEDIAL INVESTIGATION  
NSB-NLON, GROTON, CONNECTICUT

Scenario Timeframe: Future  
Receptor Population: Construction Workers  
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient					
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total	
Surface/Subsurface Soil	Surface/Subsurface Soil	Solvent Storage Area (Site 18)	Arsenic	6.4E-08	--	6.1E-10	--	6.5E-08	NA	0.01	--	0.0001	0.01	
			Lead	--	--	--	--	Skin	--	--	--	--		
			Manganese (soil)	--	--	--	--	CNS	0.0008	--	--	0.0008		
			Thallium	--	--	--	--	None Specified	0.006	--	--	0.006		
			Chemical Total	6.4E-08	--	6.1E-10	--	6.5E-08		0.02	--	0.0001	0.02	
		Exposure Point Total						6.5E-08						0.02
		Exposure Medium Total								6.5E-08				
Medium Total								6.5E-08						0.02
Receptor Total			Receptor Risk Total					6.5E-08	Receptor HI Total					0.02

From Basewide Groundwater Operable Unit Remedial Investigation Report (TINUS, 2002a).

TABLE 9.7.CTE  
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs  
CENTRAL TENDENCY EXPOSURE  
BASEWIDE GROUNDWATER OPERABLE UNIT REMEDIAL INVESTIGATION  
NSB-NLON, GROTON, CONNECTICUT

Scenario Timeframe: Future  
Receptor Population: Full-Time Employees  
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Surface Soil	Surface Soil	Solvent Storage Area (Site 18)	Arsenic	1.0E-07	--	4.7E-09	--	1.1E-07	NA	0.003	--	0.0001	0.003
			Lead	--	--	--	--	--	Skin	--	--	--	--
			Thallium	--	--	--	--	--	None Specified	0.002	--	--	0.002
			Chemical Total	1.0E-07	--	4.7E-09	--	1.1E-07		0.004	--	0.0001	0.005
		Exposure Point Total						1.1E-07					0.005
		Exposure Medium Total						1.1E-07					0.005
Medium Total								1.1E-07					0.005
Receptor Total								1.1E-07					0.005
								Receptor Risk Total					Receptor HI Total
								1.1E-07					0.005

From Basewide Groundwater Operable Unit Remedial Investigation Report (TINUS, 2002a).

TABLE 9.8.CTE  
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs  
CENTRAL TENDENCY EXPOSURE  
BASEWIDE GROUNDWATER OPERABLE UNIT REMEDIAL INVESTIGATION  
NSB-NLON, GROTON, CONNECTICUT

Scenario Timeframe: Future  
Receptor Population: Older Child Trespasser  
Receptor Age: Adolescent

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient						
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total		
Surface Soil	Surface Soil	Solvent Storage Area (Site 18)	Arsenic	2.9E-08	--	3.3E-09	--	3.3E-08	NA	0.002	--	0.0002	0.002		
			Lead	--	--	--	--	Skin	--	--	--	--			
			Thallium	--	--	--	--	None Specified	0.001	--	--	0.001			
			Chemical Total	2.9E-08	--	3.3E-09	--	3.3E-08		0.003	--	0.0002	0.003		
		Exposure Point Total						3.3E-08					0.003		
		Exposure Medium Total								3.3E-08					0.003
Medium Total									3.3E-08					0.003	
Receptor Total				Receptor Risk Total					3.3E-08	Receptor HI Total					0.003

From Basewide Groundwater Operable Unit Remedial Investigation Report (TINUS, 2002a).

TABLE 9.9.CTE  
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs  
CENTRAL TENDENCY EXPOSURE  
BASEWIDE GROUNDWATER OPERABLE UNIT REMEDIAL INVESTIGATION  
NSB-NLON, GROTON, CONNECTICUT

Scenario Timeframe: Future  
Receptor Population: Child Residents  
Receptor Age: Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Surface/Subsurface Soil	Surface/Subsurface Soil	Solvent Storage Area (Site 18)	Arsenic	4.7E-07	--	1.8E-08	--	4.9E-07	Skin	0.04	--	0.001	0.04
			Lead	--	--	--	--	--	NA	--	--	--	--
			Manganese (soil)	--	--	--	--	--	CNS	0.003	--	--	0.003
			Thallium	--	--	--	--	--	None Specified	0.02	--	--	0.02
			Chemical Total	4.7E-07	--	1.8E-08	--	4.9E-07		0.06	--	0.001	0.06
		Exposure Point Total						4.9E-07					0.06
		Exposure Medium Total						4.9E-07					0.06
Medium Total								4.9E-07					0.06
Receptor Total				Receptor Risk Total				4.9E-07		Receptor HI Total			0.06

From Basewide Groundwater Operable Unit Remedial Investigation Report (TINUS, 2002a).

TABLE 9.10.CTE  
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs  
CENTRAL TENDENCY EXPOSURE  
BASEWIDE GROUNDWATER OPERABLE UNIT REMEDIAL INVESTIGATION  
NSB-NLON, GROTON, CONNECTICUT

Scenario Timeframe: Future  
Receptor Population: Adult Residents  
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk					Non-Carcinogenic Hazard Quotient					
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total	
Surface/Subsurface Soil	Surface/Subsurface Soil	Solvent Storage Area (Site 18)	Arsenic	1.8E-07	--	4.0E-09	--	1.8E-07	Skin	0.004	--	0.00009	0.004	
			Lead	--	--	--	--	NA	--	--	--	--		
			Manganese (soil)	--	--	--	--	CNS	0.0003	--	--	0.0003		
			Thallium	--	--	--	--	None Specified	0.002	--	--	0.002		
			Chemical Total	1.8E-07	--	4.0E-09	--	1.8E-07		0.007	--	0.00009	0.007	
		Exposure Point Total						1.8E-07						0.007
	Exposure Medium Total								1.8E-07					
Medium Total								1.8E-07						0.007
Receptor Total			Receptor Risk Total					1.8E-07	Receptor HI Total					0.007

From Basewide Groundwater Operable Unit Remedial Investigation Report (TINUS, 2002a).

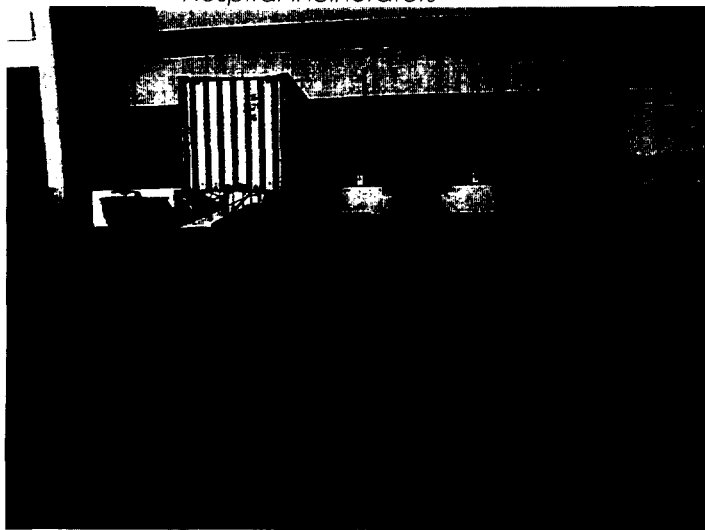
## SITE 16 – HOSPITAL INCINERATORS

### Site Description

- Site 16 consists of the two locations where a mobile incinerator was used at Naval Hospital Groton.
- The two sites (16A and 16B) were located west of Tautog Road, adjacent to Buildings 452 and 449, respectively.
- Incinerator was used to destroy medical records and medical waste contaminated with pathological agents.
- Ash was disposed at the municipal landfill.



Site 16A Location of Former Mobile Hospital Incinerators



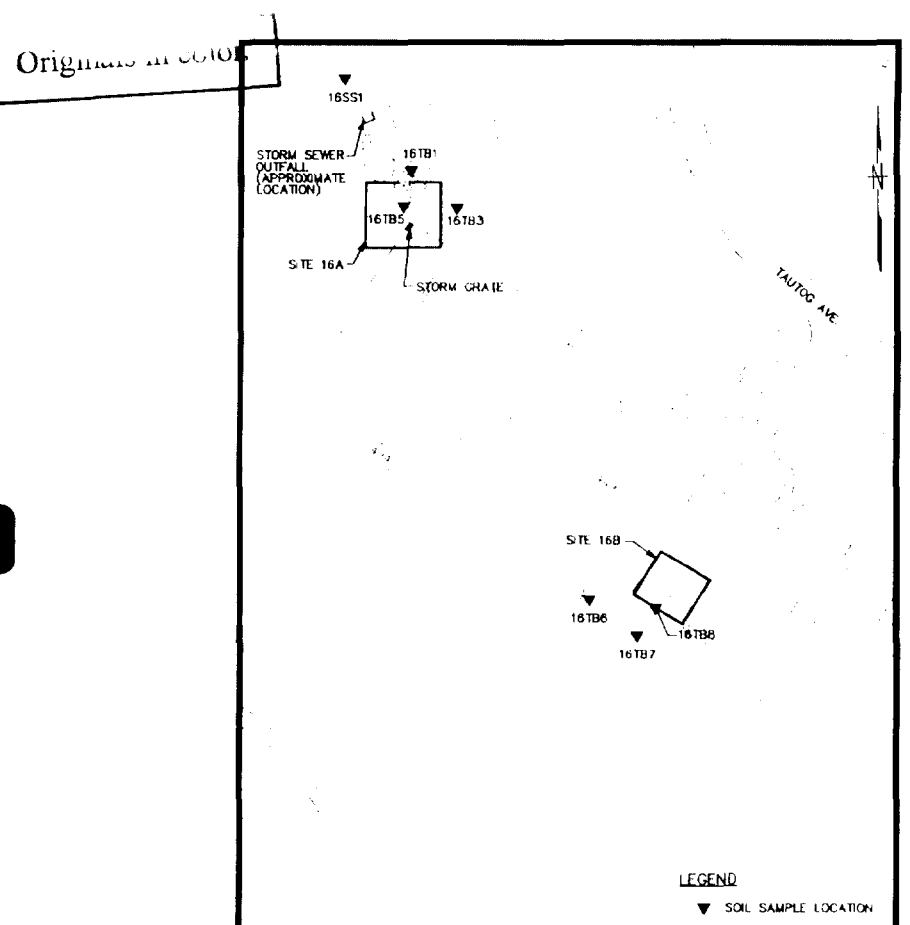
Site 16B Location of Former Mobile Hospital Incinerators

### Investigation Results

- Site 16 was evaluated during the Initial Assessment Study (Envirodyne, 1983), but further investigation of the site was not recommended at the time because the incinerator was still operational.
- Operation of the incinerator ceased and the site was investigated during the Basewide Groundwater Operable Unit Remedial Investigation (TfNUS, 2002).
- Soil samples were collected and analyzed for organic compounds, pesticides, polychlorinated biphenyls (PCBs), dioxins/furans, and inorganics. In addition, leachability tests (SPLP) were performed on the soil samples to determine the migration potential of inorganics and PCBs.
- Low concentrations of organic compounds, pesticides, PCBs, dioxins/furans, and inorganics detected in soil.
- No significant risks to human receptors from exposure to soil.
- Site does not provide suitable habitat for supporting wildlife population.
- Several chemicals were identified as posing potential contaminant migration concerns because they exceeded screening criteria, but additional information (e.g., background concentrations and leachability test results) and site conditions were used to show that the potential concerns were not significant.

### Proposed Remedy for Site 16 Soil (Operable Unit 11)

- No Further Action for Site 16 soil under CERCLA because no significant risks to human health or the environment were identified.

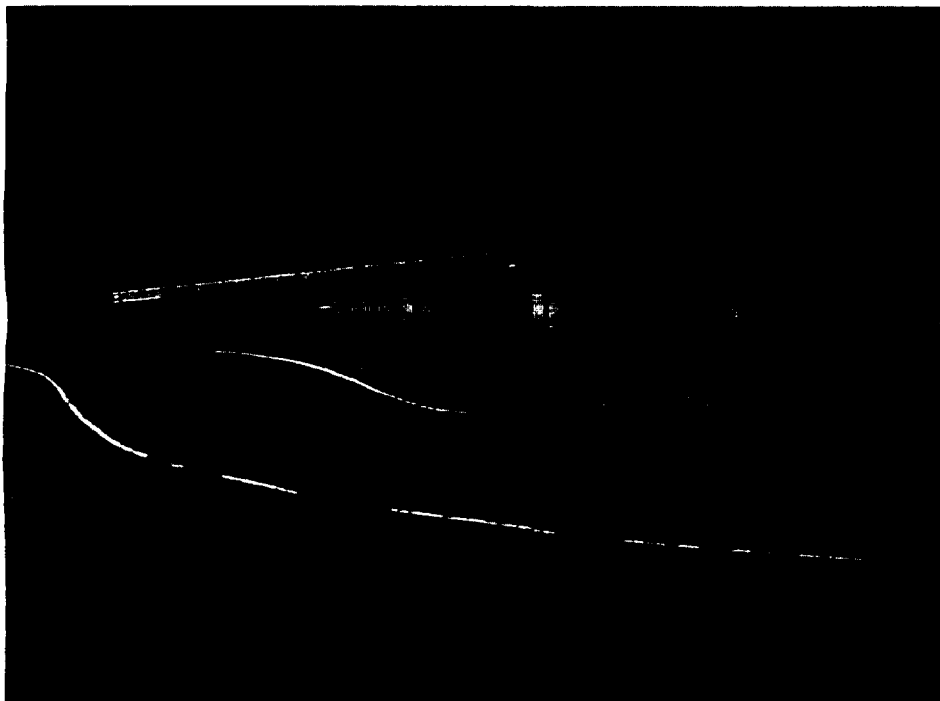


Site 16 Layout Map

## SITE 18 – SOLVENT STORAGE AREA – BUILDING 33

### Site Description

- Site 18 is located in the southern portion of NSB-NLON. Sites 15 and 23 are located south of the site.
- The building has been used for the storage of gas cylinders and 55-gallon drums of solvents such as trichloroethene and dichloroethene.



Solvent Storage Area - Building 33

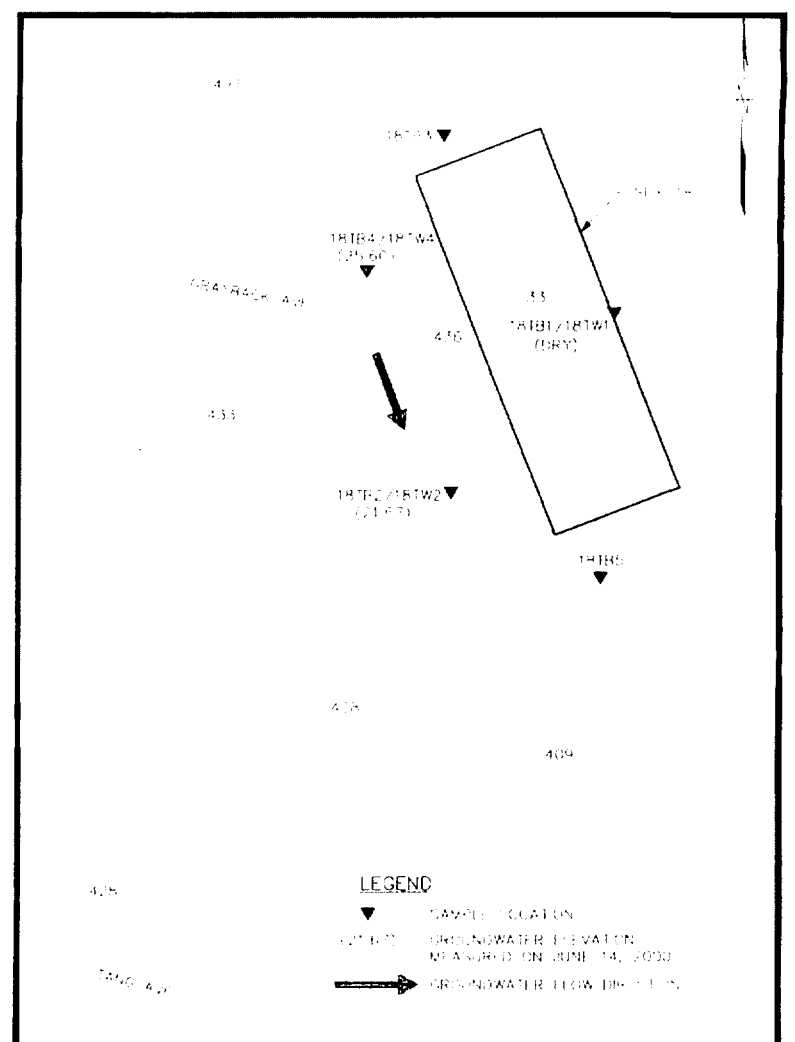


### Investigation Results

- The site was investigated during the Basewide Groundwater Operable Unit Remedial Investigation (BGOURI) (TINUS, 2002).
- Soil samples were collected and analyzed for organic compounds, pesticides, polychlorinated biphenyls (PCBs), and inorganics. In addition, leachability tests (SLP) were performed on the soil samples to determine the migration potential of inorganics and PCBs.
- Low concentrations of organic compounds (VOCs and PAHs) and inorganics detected in soil.
- No significant risks to human receptors from exposure to soil.
- Site does not provide suitable habitat for supporting wildlife population.
- Test results showed that the contaminants detected in soil are not likely to migrate to groundwater.

### Proposed Remedy for Site 18 Soil (Operable Unit 11)

- No Further Action for Site 18 soil under CERCLA because no significant risks to human health or the environment were identified.



Site 18 Layout Map



**DEPARTMENT OF THE NAVY**

ENGINEERING FIELD ACTIVITY, NORTHEAST

NAVAL FACILITIES ENGINEERING COMMAND

10 INDUSTRIAL HIGHWAY

MAIL STOP, #82

LESTER, PA 19113-2090

IN REPLY REFER TO

5090

Code EV23\ME

13 Sep 04

From: Commanding Officer, Engineering Field Activity Northeast,  
Naval Facilities Engineering Command  
To: Commanding Officer, Naval Submarine Base New London  
(Attn: Ms. Melissa Cokas)

Subj: SITE 16 AND 18 SOIL RECORD OF DECISION

Ref: (a) Department of the Navy Installation Restoration  
Manual (Draft), 2001 Update

Encl: (1) Record of Decision for Site 16 and 18 Soil (Operable  
Unit 11)

1. Please find enclosed the Record of Decision (ROD) for the Site 16 and 18 Soil. In accordance with reference (a), the ROD must first be signed by the installation Commanding Officer, and then forwarded to EPA Region I for signature.

2. The point of contact at EFA Northeast is Mark Evans who can be reached at (610) 595-0567 extension 162.

A handwritten signature in cursive script, reading "A. E. Haring", is positioned above the typed name and title.

A. E. HARING

Head, Environmental Restoration Div  
By direction

Copy to:

Ms. Kymberlee Keckler, USEPA Region I

Mr. Mark Lewis, CT DEP